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THE SIGNIFICANCE AND DIAGNOSTIC IMPORTANCE OF PAIN AS A SYMPTOM OF DISEASE.*

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Progress in medicine goes hand in hand with the meticulous care and careful consideration given to the establishment of facts to be used either for the preservation of health, the alleviation of suffering or the cure of disease. Progress is intimately associated with investigation or research. Unfortunately, in the minds of most physicians, the idea of research in medicine is usually associated with well-equipped, expensive laboratories and with men who are particularly trained in this specialty, whereas in its broadest sense every doctor engaged in the practice of medicine is potentially an investigator. He has many opportunities of making contributions to the advancement of the art and the science of medicine. The essentials for success in this field are an alert mind, capable of observing accurately, and the power to reason logically in the interpretation of accumulated data. It matters not whether these data be obtained in the laboratory or in clinical observation at the bedside.

Individually, few physicians have ever made monumental discoveries, but collectively they have advanced the art and science of medicine to such a degree that the accomplishments in this field have excited the admiration of the human race. So true is this that there is a constant demand made upon the profession for more accurate methods of preventing disease and for speedier and better curative treatment for many of the chronic ailments. In keeping with the present changing social order these demands become insistent for immediate action, so that the profession many times will advance curative procedures which are hastily thought out and are too quickly utilized without having received the sanction of justifiable experimental and clinical research. This impatience on the part of the public and the feeling of an urge or a need for action on the part of the profession is fraught with the danger of advocating the use of methods for the relief of pain which are illogical, unwise, and at times capable of doing harm to those seeking aid. The inability of the profession as a whole to complacently meet these demands has caused the rise within the medical ranks of intense specialization with its advantages and disadvantages. The enthusiastic physician engaged in a particular line of work will frequently announce premately the discovery of some method which if utilized will relieve the suffering, the pain, the misery and discomfort of many hundreds and thousands of people afflicted with a particular ailment. Such a discovery excites in the minds of the laity hope which cannot always be justified. Witness within the past thirty-five years the rise in popularity and the gradual decline of many of the fads and fancies of medical practice. Practically all of these have added something worth while to the advancement of medical knowledge and have contributed, in some instances, to the cure of disease; but passing years and the method of trial and error have tempered many of the original claims for these discoveries.

In the average medical consultant's office examples of such enthusiasm on the part of physicians can be seen almost any day. For instance, the middle-aged man comes for relief of pain in his back which has not been benefited after the extraction of his teeth and the removal of his tonsils; or we may see the psycho-biological misfit who comes

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with a story of having taken for months on end various gland preparations in order to cure the results of an environment to which he has been unable to adjust his personality; also the sufferer from various and sundry digestive disorders who has been restricted to this and that food and who now is a gastro-intestinal invalid, able to live on a very inadequate diet because of such marked sensitivity to various foods for the cure of such diseases as migraine, chronic urticaria, eczema, etc. Again, the loquacious individual, usually a woman, who presents herself with an abdomen unilaterally, medially, tangentially or bilaterally scarred by many surgeons in an effort to relieve an ever-present abdominal pain; as well as the unfortunate individual with congestive heart failure, the result of syphilitic aortic regurgitation, whose physician believed that a few doses of salvarsan would cure his syphilis. Many other examples could be cited to illustrate the fact that therapeutic procedures should not be universally accepted nor generally advocated until careful investigation over a period of time has proven their worth.

It is not my desire to in the slightest degree minimize the wonderful advances and contributions made to medical knowledge by the enthusiasm of those working in particular fields,—for example, consider the doctrine of focal infection which was so rampant and supposed to cure so many ailments only a few years ago. This was a wonderful contribution to medical knowledge, but the passage of time and mature deliberation have greatly modified many of the claims originally made for its curative value. One now approaches the problem with more consideration and does not advise the removal indiscriminately of all tonsils, teeth, etc., and so it is with many other procedures. All contain something of value which is capable of resulting in great good, but, if advised for all sufferers, will bring disappointment to the doctor and to the patient.

In a consideration of the question of pain, I do not come to you with any new discovery for the easy and quick diagnosis of its cause as a symptom of disease. On the other hand, I am here to ask that as physicians we utilize the true, trusted and tried methods at our disposal, viz., a careful history, a thorough physicial examination and, if necessary, the laboratory, before we rush out with our increasing therapeutic armamentarium, which may contain some remedies of value if wisely and judiciously employed.

Pain or misery is the most common complaint for which the patient seeks relief. It is usually the first evidence that something has gone wrong with the normal, harmonious physiological functioning of the body. Pain is an almost undefinable sensation yet all of us are familiar with what is meant when a patient comes with this complaint. We understand that he has an annoying, distracting, uncomfortable, perhaps incapacitating sensation from which he seeks relief. Only a few years ago it was commonly believed that all pain was caused by a demonstrable pathological lesion which produced definite changes in some organ or tissue of the body. This pathological process could be produced by the invasion from without of a virus, bacteria, or a chemical poison. After a careful and thorough search, if no such pathological lesion was demonstrated, the patient was told that he had a good imagination and that he utilized it successfully in producing a disturbing sensation which he should forget.

With the passage of time it was soon known through the brilliant researches, chiefly of the physiologists, that functional derangement of the harmonious working of an organ would produce pain indistinguishable from that caused by a known pathological process. An appreciation of this fact has brought forward much study of the sensation, pain, in an effort to arrive at a real understanding of its significance and importance. To this end, having passed through much of the enthusiasm of the early workers in seeking various cures for this sensation, we can now adjust ourselves to a calm consideration of its causes.

All of us are familiar with the common somatic pain and discomfort which results from physical trauma such as a fractured femur. We are equally as familiar with the pain resulting from inflammation such as a carbuncle. We know of the distressing pain resulting from obstruction to the flow of blood by an embolus or from thrombosis of an artery. The causes of pain such as this are obvious pathological lesions which can be seen and demonstrated. We know that these injuries or processes have caused a localized stimulation of the sensory nerve endings in the integument of the body where the lesion is located. Conditions such as these are simple enough and the diagnostic importance of pain is readily

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appreciated; however, if the pain resulting from any one of these factors is long continued and associated with confining disability, another source of pain other than that mentioned immediately becomes apparent in that the economic status and the social security of the individual is jeopardized. There is added to the physical pain another misery which might not be so obvious but which will require study and observation to properly evaluate. There develops, with physical pain, mental misery, the result of anxiety, uncertainty, and the feeling of social insecurity, which may prolong and retard recovery. With practically all physical pain there is usually associated mental misery.

All of us are equally familiar with referred pain, that is, painful sensations referred to parts of the body quite remote from the lesion producing the pain. At the onset of an acute appendicitis the first pain experienced by the average individual is referred to the epigastrium and only later does the pain become localized to the lower right quadrant. For the correct interpretation of such phenomena as this it is essential that one be familiar with the intricate nerve supply of the internal organs through the autonomic or sympathetic nervous system and the intimate relationship existing between this system and the cerebro-spinal nerves. Any explanation of referred pain depends upon the wide distribution of nerves from the sympathetic system supplying the thoracic and abdominal viscera with many afferent and efferent pathways to the cerebro-spinal system; and from the cerebro-spinal system to the skin, the superficial blood vessels and muscles. Stimuli causing pain when applied to the cerebro-spinal nerves are wholly ineffective when applied to the organs innervated by the autonomic nervous system. Effective stimuli for the autonomic nerves are stretching of smooth muscle, traction or tension on a nerve, stretching the capsule of an organ, chemical changes in the body fluids and toxins of the infectious diseases. These stimuli when applied to the thoracic or abdominal viscera cause discomfort, not at the place of stimulation but at some point on the surface of the body. Pain referred to the neck and jaw as well as the arm and chest in patients with coronary occlusion; the crises and atypical attacks of abdominal pain, the result of syphilis of the central nervous system and brain tumors, are well known examples of referred pain. Chemical poisons such as lead, arsenic, mercury, etc., cause referred pain; in the acute infectious diseases—scarlet fever, measles, mumps, rheumatic fever,—pain may be referred to the abdomen and thorax. Certain intoxications such as diabetic coma, alcoholism, and the bite of the latrodectus mactans cause considerable difficulty in their differentiation from intra-abdominal lesions. Various other conditions might be mentioned to further confuse the picture of referred pain. Emotional states such as fear, anger, rage and various affective disorders acting through the diencephalon or by stimulating the ductless glands produce many types and degrees of pain and misery.

The intensity, the type and severity of reflex pain experienced depends on the psycho-biological pattern of the individual. His method of reaction to pain is determined in great part by his intelligence and his instinctive emotional nature. The strikingly different reactions observed in individuals to practically the same stimulus are well known,—one extreme is the stolid, phlegmatic person who suffers severely before complaining or seeking relief, while the other is the highly sensitive, emotional person who complains long and loudly of the most distressing pains "that cannot be endured for another minute, that are almost killing him," yet he is able to be up and about and, when his attention is otherwise distracted, forgets some of these "horrible things." The clinician will learn by careful observation to develop the ability to evaluate symptoms such as these. Such ability comes only to those who devote time, patience and study to these persons.

One of the most valuable aids in assisting to properly evaluate the significance of pain is the expression on the patient's face during the recital of his history and during the physical examination. The following case history and observations illustrate much of what I have said:

A married woman, 27 years of age, came complaining of stomach trouble, abdominal pain and nervousness. All three complaints had existed for the past two and one-half years. They had not been relieved by an appendectomy and a tonsillectomy. The patient is the only daughter in a family of four children. The father is a hard working, deeply religious, honest, stable person. The mother is likewise deeply religious, sympathetic, and very devoted to the only daughter. The patient was raised in a religious atmosphere and attended Sunday School and church regularly. She graduated from high school where she was a student of average

ability, shortly thereafter entering a business college for one year and became a stenographer, which occupation she followed for four years, when she was married. The marriage was not particularly pleasing to her parents but it suited her,—she was quite happy, well adjusted and progressed normally. She has been married five years, but has never been pregnant because of contraceptives. She is anxious for children but the husband does not feel that he can assume financial responsibility for their care. (He is not on the relief.)

In February, 1933, the patient had a rather sudden attack of generalized pain referred to the abdomen, associated with frequent stools, cramping, frequency of urination, considerable nausea but no vomiting. There was no fever, no elevation of the leucocyte count, no increase in pulse rate. She was seen by a physician (the result of his examination I do not know); however, he made a diagnosis of appendicitis and advised immediate operation. It was reported to the patient by the surgeon that the appendix was found to be in a knotted condition with the intestines all around it. There was no drainage. Ten days after leaving the hospital the incision became infected (apparently a skin infection) which required two months for healing. While in the hospital, four days after the operation, she had a similar attack to the one which provoked the appendectomy. Since leaving the hospital she has continued to have periods of abdominal pain, nausea, vomiting, diarrhea, and is generally miserable. Since 1933 she has seen many physicians, has had numerous X-rays, has had many diets, yet no one up to the present time has given her relief. She passes considerable mucus in her stools but no blood. The stools are small in volume, usually fairly well formed. The abdominal pain, as a general rule, is over the entire abdomen. Occasionally it is most severe in the upper right quadrant, frequently in the lower, which runs through to her back. It usually begins in the afternoon or evening and seldom prevents sleep. Within the past two and one-half months all of her symptoms are greatly exaggerated. She worries constantly, cries about half of the time and is a semi-invalid. She is unable to do her housework, and she wonders what on earth can be the cause of such excrutiating pain. She has been operated on, she has been dietarily regulated, she has taken bushels of medicine, her suffering gets worse, and she wants to know the worst that is the matter and if there is any possibility of getting well.

The physical examination revealed a well-developed, well-nourished, over-weight woman, 5 feet, 4 inches tall, weighing 183 pounds. She is anxious, apprehensive, emotionally unstable, fearful, crying frequently during the history and during the examination. Her co-operation was the best that she could give. The general examination revealed very little except a well-healed surgical appendectomy scar in the lower right abdominal quadrant. The abdominal wall was diffusely sensitive to light and deep palpation but relaxed well when the attention was otherwise engaged. There was no localized tenderness. The various intra-abdominal organs could not be palpated. Proctoscopic and sigmoidoscopic examinations revealed nothing of importance. A careful study of the stools on many occasions showed only an increase in the amount of mucus. An X-ray of the gastro-intestinal tract revealed a spastic colon involving the descending and sigmoid portions. The blood and other examinations gave no information as to her trouble.

We have, then, for consideration a patient who is suffering a great deal of pain and misery, who has tried surgery, who has tried diet and drugs, but who has steadily and progressively grown worse. What is the cause of her pain? Years ago she would have been told that her pain was imaginary, that she should go about her business and forget it, that she should get interested in something and have something to do. When this woman and her complaints are carefully scrutinized we find the following: She was raised very strictly in a religious environment; she has very decided ideas of right and wrong; she is kind and sympathetic but has little patience with many of the modern forms of amusement such as card playing, dancing, and social drinking—the last, in her mind, "the greatest curse of the age." She wants children, but hasn't any. At the onset of the illness which precipitated surgical intervention, her husband, for the first time in their married life, came home late to his dinner, which the wife had prepared with a great deal of care. When he did not arrive on time she became a little apprehensive, since he had always been accustomed to coming home a short while before the usual dinner hour. When he did arrive some hour and a half later, he had been in the company of convivial friends and had lingered to worship at the

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shrine of Bacchus, pouring two or three libations into his alimentary canal to properly honor this god. Upon reaching home he was jovial, kind, loving, sympathetic, and not at all remorseful for having partaken of the "damnable, home-wrecking, degrading stuff." This attitude of the husband caused a tremendous psychic trauma to the wife, who had been raised in such a religious, God-fearing atmosphere. She saw immediately the complete destruction of all of her ideals, her home, her home life, and the gates of hell at that moment were thrown open to receive those who so transgressed (her husband included). With these thoughts she wrestled during the night, causing a tremendous emotional upheaval. She was unable to get out of bed the next morning. Very soon there appeared nausea, abdominal pain, diarrhea, and loss of appetite, and shortly thereafter she lost her appendix. The second attack of abdominal pain occurred on the fourth day after her operation,—it was again coincident with the fancied detection of the odor of alcohol on her husband's breath. The patient being a person of pride, and there having been some opposition on the part of her parents to her marriage, she has never discussed with them the rare and not flagrant departure of her husband from the straight and narrow path.

To make a long story short, with the adjustment of the situation, explaining the whys and wherefores to both parties concerned, and with the promise on the part of the husband to refrain from further alcoholic beverages, the patient is quite well, happy, has no pain, takes no medicine and follows no dietary restrictions other than those necessary to reduce her weight.

The recital of the pain and misery endured by this patient for a period of two and one-half years illustrates many of the problems constantly arising in the proper evaluation of the symptom of pain. In order not to be misled the ingenuity, the clinical acumen and the versatility of the physician are frequently taxed to their utmost. There isn't any simple, easy method of solving these problems. If the psycho-biological pattern of the sufferer is known, if the emotional reaction to the stress and strain of life is understood, if abnormal physiological reactions, the result of hypersensitivity of the autonomic nervous system, are appreciated, and then the patient subjected to a most careful and complete physical examination, numerous useless, expensive, exhibitionistic types of therapeutic procedures will be discarded, not by the enthusiast, but by the careful physician who thinks well of the patient as a whole before he advises action.

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THE ERYTHROCYTE AND ITS RELATION TO BLOOD PRESSURE.*

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Certain experiments conducted in my laboratory during the past ten months induced me to place these observations on record. This preliminary report deals with the study of one hundred and forty cases in which ten were normal, one hundred and twenty-five were hypertensions, and five were hypotensions.

Abnormal blood pressure has always been and is today a serious problem. Should the hypertension be associated with definite pathological findings the condemned organ or organs become the center of attack, in an attempt to restore the pressure to normal. However, we so frequently see a hypertension varying from an increase of a few to two hundred and fifty millimeters of mercury, but no definite etiology can be demonstrated after the most careful clinical and pathological examinations. To this obscure type of blood pressure we have applied the name "essential hypertension." In this group the kidney is frequently indicted, although no single or group of laboratory findings condemn it in any manner whatever. Should the kidney be so fortunate to escape the indictment, the diagnosis of arteriosclerosis is often made, yet the most painstaking examination reveals no definite arterial changes that can be actually demonstrated. Hypotension not associated with myocardial damages, blood loss, or shock has also presented its problem, although it does not carry the mortality or morbidity rate of hypertension.

Russell Haden, Osgood, Wintrobe and Miller in

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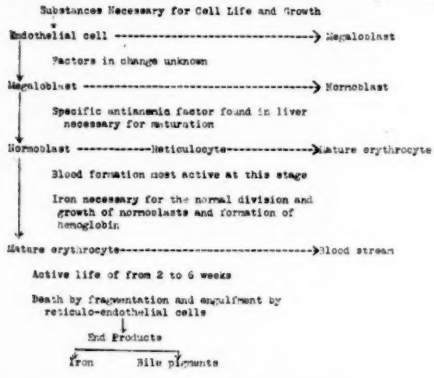
this country, Bonninger, of Germany, Csaki, of Hungary and Bie and Moller, of Norway, determined that the accurate measurements of the red blood cells could be made in cubic microns. The study of the red blood cells in health and disease by Price Jones stimulated much research work in this field.

We must first familiarize ourselves with the origin, life and the end-products of the red blood cell before a comprenhensive study of this subject can be made. Normally the red blood cells are formed at the rate of six million to one trillion per day, and in the normal individual there are about twenty-five trillion red cells. The four most important chemical products that make up the red blood cells are iron, water, carbohydrates and proteins. The others need not be discussed at this time. The erythrocyte develops as shown by Haden, Sabin, and Witt, from the endothelial cells of the capillary of the red bone marrow. The stage of formation is shown in diagram 1.

Diagram 1. Life History of the Erythrocyte



(Haden)

Since cell division occurs in the marrow at all stages and is most active at the normoblast level, each circulating erythrocyte is not derived from a single endothelial cell. Sabin states that 99 per cent of cells of normal marrow are erythroblasts and normoblasts. Very few megaloblasts are found, although active division occurs at this stage. The megaloblast and normoblast stages are the two important periods in cell development. After reaching maturity in the marrow, all but a few lose their nucleus and vital staining granules. They are then fed into the blood stream as normal erythrocytes.

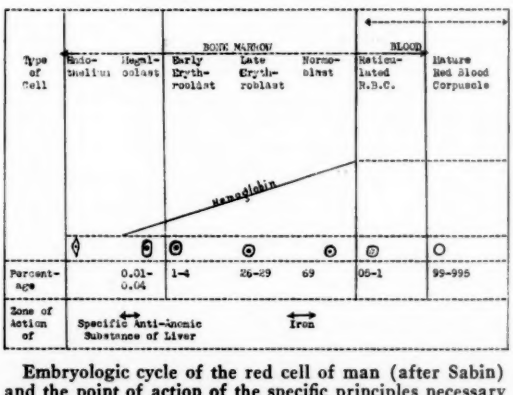
The specific anti-anemic factor found in liver necessary for maturation occurs between the megaloblast and normoblast stages, while the iron necessary for division and growth of the normoblasts and formation of hemoglobin is taken up at the normoblast stage. The mature erythrocyte after entering the blood stream has an active life from two to six weeks. After fulfilling their function these cells undergo fragmentation. The fragments are normally taken up by the reticulo-endothelial cells and dissolved in the spleen. The hemoglobin sets free, and is broken into hematin and globin. The hematin is changed into bile pigments after the iron has been split off. The iron is stored up and used again and again.

A mature, healthy erythrocyte contains a normal amount of hemoglobin and is normal in measurements. But under certain conditions this cell varies materially in its size and hemoglobin content. Therefore we have the following types of cells;

1. Normocytic and normochromic: volume index normal, color index normal.
2. Normocytic and hypochromic: volume index normal, color index low.
3. Macrocytic and hyperchromic: volume index increased, color index increased.
4. Macrocytic and normochromic: volume index increased, color index normal.
5. Macrocytic and hypochromic: volume index increased, color index low.
6. Microcytic and hypochromic: volume index low, color index low. (Haden).

The two critical points in cell maturation are shown in the following diagram:

Critical Points in Maturation



Embryologic cycle of the red cell of man (after Sabin) and the point of action of the specific principles necessary for normal red cell formation.

As previously stated the red cells can now be definitely measured in cubic microns by volume index. The normal cubic measurement is 1, and cells measuring more than 1 and less than .9 are definitely abnormal cells.

TECHNIC OF DETERMINATION OF THE RELATIVE CELL MASS

Run 2 c.c. of 1.4 per cent solution of sodium oxalate into a graduated 12 c.c. or 15 c.c. centrifuge tube with a syringe. Withdraw 20 c.c. of blood from an arm vein with a syringe. Transfer exactly 10 c.c. to the centrifuge tube containing the sodium oxalate solution and mix by inverting. Centrifuge for one hour at 2500 r.p.m. in a large centrifuge. Read the volume of cells. The blood of normal young men yields about 46 c.c. of cells and of young women about 41 c.c. To the other 10 c.c. of blood add one drop of a saturated solution of potassium oxalate and mix. This specimen is used for a red cell count and for hemoglobin determination, and blood chemistry.

ILLUSTRATIVE CALCULATIONS

On centrifuging 10 c.c. of blood mixed with 2 c.c. of 1.4 per cent sodium oxalate at 2500 r.p.m. for one hour, 4.5 c.c. of packed corpuscles are obtained. A normal blood with a count of five million yields 4.6 c.c. when similarly centrifuged. The volume percentage of normal of the packed cells of the unknown blood is 98.

The cell count of the unknown blood is 4,900,000.

The average individual cell volume is

$$\frac{45.0 \times 10^{12}}{4.90 \times 10^{11}} \text{ equals 92.0 cubic microns}$$

The volume index is

$$\frac{\frac{4.5}{4.6}}{\frac{4.90}{5.00}} \text{ equals 1.00}$$

(Haden)

Here I would like to emphasize the care in the red count as this is the most important part in the procedure. It has been my observation, also a number of others, that many grave errors occur in making the red count. The following procedure has been adopted in my laboratory. Three pipettes are filled in the usual manner. With the original Neubauer ruling, count the four corner groups of 25 small squares. With the improved Neubauer ruling count the four corner groups of 16 squares and one center group. In making the counts include all corpuscles touching the lines on the top and one adjacent side of each square and not those touching the bottom and other side. There must not be a difference of over 150,000 cells in each of the six counts.

APPLICATION OF THE NUMBER AND SIZE OF THE ERYTHROCYTES TO BLOOD PRESSURE

Applying the Achimides law (a body emersed in a liquid displaces its square surface of body measurements), it must be assumed that the red blood cells likewise exert a similar action on the plasma.

In order that a satisfactory standard pressure could be obtained for a working basis, I have used the normal standard as adopted by the insurance companies of America as follows:

Age	*Systolic Pressure*
15 and under	111
15 to 20	117
20 to 25	122
25 to 30	125
30 to 40	128
40 to 50	130
50 to 60	132
60 to 70	135
70 to 80	138

From this and volume index I devised the following formula:

Normal pressure x by percentage of increase of cell size obtained by volume index gives the actual systolic pressure providing there is no anemia. If anemia is present the following formula has been adopted:

Divide the actual number of red cells counted by the normal (5,000,000);

Subtract the percentage of red cells from 100 and that will give percentage of red cell loss.

Multiply the normal blood pressure by 46. If a female, 41.

This product multiplied by percentage of cell loss, subtracted from the increase in pressure obtained by multiplying the normal by the percentage of cell enlargement gives the actual pressure. Male 25 years of age—hemocrit reading 50—red cells 4,000,000—normal systolic pressure 122.

$$\frac{\frac{50}{46}}{\frac{400}{500}} \text{ equals volume index of 1.39}$$

The cells are increased 39 per cent in size.

122x39 equals 47.58

122 plus 47.58 equals 169.58

46 represents the percentage of solid (red cells) within the blood vessels; assuming that plasma is

normal in amount the deduction will have to be in cell loss. Therefore 46x122 equals 56 or pressure exerted by cell normally. This patient had only four million red cells, thus 4,000,000 divided by 5,000,000 equals 80 per cent or a loss of 20 per cent. 20 per cent of 56 equals 11.2 and 169.5 minus 11.2 equals 158.38 patient's actual systolic blood pressure.

During the past ten months one hundred and twenty-five cases of hypertension, ten cases with normal blood pressures in young, healthy adults, and five cases of hypotension have been checked by this method. In order that any source of error could be found in this method of determining blood pressure, twenty-five cases, with normal and abnormal pressures were taken by some other physician using a standard mercury manometer. My only contact with the patient was to obtain 20 c.c. of blood. In every instance the blood findings checked with the blood pressure instrument findings and the error was less than 3 per cent. I may say that each patient was put at rest fifteen minutes before the pressure was taken with the instrument.

One hundred and forty cases have been studied in my laboratory, and with the exception of three cases that showed marked kidney damage, the pressure findings did not vary over the point previously described. After definitely proving that blood pressure could be determined by the blood findings and that hypertension was the result of a macrocytosis of the red cells and that hypotension was either a microcytosis or a loss in actual number in red blood cells, an attempt was made to find the cause of the variation in the cell size. The iron content of the whole blood, the plasma, and urine reveal some very interesting facts.

The new method of Wong adopted by Haden in the study of the hemoglobin content and total blood iron, was used in my investigation. The iron content of the whole blood, plasma and urine were done in sixty cases. In order that an accurate check could be made on the iron standard five normals with a five million red count, and with a hemoglobin of approximately 100 were first checked. The results ran practically the same as those of Carl Reich and Haden. The hemoglobin content figured from the iron findings was likewise normal. The results of these findings can be found in charts 1 and 2.

It may be stated, however, that the hypertension cases showed a marked increase in iron in the blood cells. Those cases showing albumin in the urine likewise showed an iron content varying from nine milligrams to as much as 12.5 mlg. per 100 c.c. Another interesting factor was that, as the iron was reduced in the red blood cell, the plasma iron was also reduced with a disappearance of the iron from the urine. All cases that showed iron free urine were likewise free of albumin. Therefore it would seem logical to conclude that a treatment of hypertension case must be directed at the iron content of the blood and plasma also, to reduce the size of the red blood cell. With this point in view twenty-six cases have been treated.

The normal intake a day for the average individual is 35 mlg. The total iron content of the foods received by these twenty-six cases was 15 mlg. Those in which an anemia of any degree was present were not permitted to have leafy vegetables, but were put on a diet that was rich in proteins, namely, beef and liver. Those that showed a slight amount of anemia were reduced to 50 mlg. of proteins per day in order that a more liberal supply of vegetables could be used and also fats. In the meantime the iron content was kept within the 15 mlg. limit, with the exception of two cases which will be discussed later in this paper.

Case No. 1.—Hypotension responded to large doses of iron.

Case No. 3.—Blood pressure returned to normal after four weeks with a negative albumin. However, he went on a vacation for a month and during the time did not follow the diet at all. On returning his blood pressure was practically the same as it was before treatment was started. His urine through this time remained clear. During the past two weeks he has been on his diet and his pressure is now 138.

Case No. 4.—Was an essential hypertension with marked headaches and anginal pain on walking. At present she is symptom free, although her pressure is somewhat elevated.

Case No. 18.—Responded to a diet of 15 mlg. of iron with a pressure drop to 140. The diet was increased 19 mlg. and her pressure again returned to 171. She has shown no change to date.

Case No. 19.—Was discharged from the Navy on account of a severe hypertension, severe headaches, dizziness, and anginal pain on any moderate

No. I—BEFORE TREATMENT

C.N.	S.	R.	A.	Albu.	R.B.C.	Hg.	B.I.	P.I.	U.I.	N.P.N.	Ctn.	V.I.	B.P.I.	B.P.V.I.	Duration
1	F	W	27	Neg.	444	80	42.1	10.4	Neg.	.....	.....	.9	110	109	D. K.
2	F	W	55	Neg.	390	90	60.9	15.2	Neg.	.....	.....	1.54	190	189	5 yrs.
3	M	W	78	++++	420	100	59.7	21.3	15.5	.....	.....	1.35	174	174	10 "
4	F	W	63	Neg.	382	110	67.2	14.6	Neg.	.....	.....	1.69	222	217	4 "
5	F	W	68	Neg.	338	95	62.5	15.5	Neg.	.....	.....	1.50	195	195	5 "
6	M	W	69	Neg.	420	98	65.5	16.4	Neg.	.....	.....	1.30	168	166	4 "
7	F	W	49	Neg.	416	107	56.6	15.6	Neg.	.....	.....	1.39	172	171	2 "
8	M	W	44	Neg.	451	100	59.2	12.3	Neg.	.....	.....	1.15	144	144	5 "
9	F	W	73	Neg.	406	95	60.2	13.4	Neg.	.....	.....	1.30	170	169	6 "
10	F	W	59	Neg.	375	90	57.7	17.2	Neg.	.....	.....	1.45	184	181	6 "
11	M	W	50	Neg.	398	100	60.8	18.7	Neg.	.....	.....	1.30	165	163	8 "
12	M	W	64	Neg.	300	85	57.8	15.9	Neg.	.....	.....	1.55	190	186	8 "
13	F	W	63	+++	319	90	55.7	17.5	12.5	58.6	1.7	1.40	170	169	4 "
14	M	W	78	+	431	108	60.1	16.2	.85	38.7	1.6	1.39	184	183	5 "
15	F	W	70	Neg.	406	90	57.5	15.2	Neg.	30.7	1.2	1.30	172	171	6 "
16	F	W	65	Neg.	375	90	53.2	11.3	Neg.	31.3	1.4	1.45	185	181	4 "
17	F	W	43	Neg.	421	100	52.5	11.2	Neg.	.....	.....	1.27	155	155	3 "
18	F	W	61	Neg.	405	105	59.5	17.9	Neg.	30.5	1.1	1.35	172	171	8 "
19	M	W	44	++++	351	102	81.4	25.6	18.9	50.4	1.4	1.81	258	217	4 "
20	F	W	60	Neg.	409	94	53.5	13.9	Neg.	30	9.5	1.24	160	158	6 "
21	M	W	29	++++	240	88	99.9	27.2	19.4	187.6	.....	1.8	203	199	4 "
22	F	W	65	+	390	100	68.7	17.9	11.1	.....	.....	1.62	210	207	5 "
23	F	W	59	Neg.	400	95	54.5	15.6	Neg.	.....	.....	1.28	165	162	6 "
24	M	W	62	Neg.	340	85	53.6	15.5	Neg.	.....	.....	1.31	160	158	3 "
25	M	W	27	Neg.	340	70	39.9	9.7	Neg.	30.2	1.5	1	110	109	5 wks.
26	M	W	22	Neg.	500	100	47.7	11.2	Neg.	31.4	1.3	1	120	120	Normal
27	M	W	48	Neg.	328	90	.....	.....	.....	.....	.....	1.52	186	182	8 yrs.
28	F	C	17	++++	249	72	57.7	25.5	16.7	19.5	.....	1.59	162	162	Eclampsia
29	F	W	52	++	380	90	57.3	15.4	11.3	35.5	1.5	1.39	170	170	5 yrs.

Abbreviations:.

C.N...Case number.
S.....Sex.
R....Race.
A.....Age.
Albu..Albumin in urine.
R.B.C...Red blood count.
Hg.....Hemoglobin.
B.I.....Total blood iron ml. per 100 cc.
P.I.....Total plasma iron ml. per 100 cc.
U.I.....Total urine iron ml. per 100 cc.
N.P.N....Non protein nitrogen.
Ctn.....Creatinin.
V.I.....Volume index.
B.P.I.....Blood pressure by instrument.
B.P.V.I...Blood pressure by volume index.

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No. II—AFTER TREATMENT

C.N.	Albu.	R.B.C.	Hg.	B.I.	P.I.	U.I.	N.P.N.	Ctn.	V.I.	B.P.I	B.P.V.I.	Duration
1	Neg.	490	98	49.3	10.1	Neg.	.....	.....	1	122	122	3 wks.
2	Neg.	400	80	51.3	12.3	Neg.	.....	.....	1.10	135	133	4 "
3	Neg.	460	95	50.1	13.4	Neg.	.....	.....	1.04	140	138	3 "
4	Neg.	341	78	68.9	12.7	Neg.	.....	.....	1.30	160	158	5 "
5	Neg.	400	85	48.5	15.5	Neg.	.....	.....	1.15	140	139	4 "
6	Neg.	435	90	49.9	11.1	Neg.	.....	.....	1.05	138	136	4 "
7	Neg.	470	98	47.2	11.9	Neg.	.....	.....	1.05	135	135	3 "
8	Neg.	480	100	47.6	10.9	Neg.	.....	.....	1	130	130	3 "
9	Neg.	490	98	49.8	13.9	Neg.	.....	.....	1	139	137	3 "
10	Neg.	476	95	47.1	14.7	Neg.	.....	.....	1	130	130	4 "
11	Neg.	460	94	52.7	15	Neg.	.....	.....	1.06	134	133	4 "
12	Neg.	351	80	47.4	13.2	Neg.	.....	.....	1.12	135	133	4 "
13	Neg.	409	85	61.4	10.3	Neg.	.....	.....	1.16	148	148	4 "
14	Neg.	455	96	51.9	13.7	Neg.	.....	.....	1.08	140	138	2 "
15	Neg.	440	90	49.9	12.2	Neg.	.....	.....	1.09	138	138	4 "
16	Neg.	420	86	43.3	13.7	Neg.	.....	.....	1.10	138	138	3 "
17	Neg.	450	92	46.7	12.8	Neg.	.....	.....	1	130	130	4 "
18	Neg.	405	105	61.4	13.3	Neg.	30.5	1.1	1.35	171	171	4 "
19	Neg.	420	95	57.2	11.2	Neg.	.....	.....	1.3	160	160	3 "
20	Neg.	429	90	52.2	11.3	Neg.	.....	.....	1.10	140	140	4 "
21	.....	250	40	33.5	15.2	9.6	38.9	1.5	1.	150	100	4 "
22	Neg.	400	85	51.7	11.3	Neg.	.....	.....	1.25	160	158	3 "
23	Neg.	439	98	49.8	12.5	Neg.	.....	.....	1.10	136	136	5 "
24	Neg.	386	76	42.6	12.2	Neg.	.....	.....	1	134	134	5 "
25	Neg.	465	95	47.3	12.7	Neg.	.....	.....	1	120	120	4 "
26						Normal	Case					
27						Not Tre	ated					
28	++	400	80	42.6	10.2	Neg.	.....	.....	1.07	117	117	2 "
29	Neg.	469	92	50	11.4	Neg.	.....	.....	1	130	130	3 "

exertion and was practically bedridden. His urine is now normal and he has no symptoms whatever, but his pressure is still above normal.

Case No. 21.—Entered the hospital as an extremist with severe headaches, totally blind from hemorrhages and choked discs, some heart pain, and vomiting continuously. Although this patient is still in bed and still shows albumin he is symptom free and gaining every day. You will note that the cell size was originally 1.6 and the iron index was 99.9. By reducing the iron in his diet and feeding him large amounts of proteins with a maximum intake of 15 mlg. per day his cell size has dropped to .9 microns. There is still a difference

between the actual pressure and volumetric pressure, which is undoubtedly the result of the severe kidney damage that he sustained.

Case No. 27.—Has recently had a suprarenal denervation for his hypertension with a fall in pressure of about twenty points. But after the most exhaustive treatment his pressure could not be reduced lower than the present findings. The volume index measures his pressure actually the same as on the instrument. This patient was from one of the larger cities and had to return immediately and there was no opportunity to observe him further.

Case No. 28.—Was a young girl with an eclampsia. Although she did not have convulsions she was markedly edematous, with large amounts of albumin, without pus in the urine, but many hyaline and granular casts. After the delivery her pressure and urine out-put were unchanged for ten days. She was placed on a diet rich in proteins containing 15 mlg. of iron and in two weeks left the hospital with a normal pressure, no evidence of edema, and probably the albumin in the urine at the time of discharge was due to the twenty or thirty pus cells per high powered field, as no casts could be demonstrated. She had made an uneventful recovery.

Case No. 25.—Is a hypotension resulting from hemorrhage. This patient bled profusely from a duodenal ulcer some two weeks before he came under my observation. At the time of examination his red blood count was 3,400,000 cells.

Case No. 29.—Was admitted to the hospital markedly edematous, dyspneic, large amount of fluid in abdomen, edema of the lungs, and all signs of myocardial failure. Her blood pressure on admission by instrument was 110 over 90. The volume index pressure 170. Her chart in the outpatient's department made some months before the cardiac symptoms developed showed her pressure to be 170 over 110 on each admission. This patient's pressure is now 130 over 70; there is no edema, no respiratory distress, the heart is normal and she was discharged with a red count of 4,690,000, a normal volume index also a normal urine and an iron content within satisfactory limits.

CONCLUSIONS

1. An accurate determination of the systolic blood pressure can be made by the blood findings as described.

2. The iron determinations point to the belief that cell enlargement in hypertension is due to an increased iron content of the red blood cells.

3. Hypotension uncomplicated by cardiac impairment is the result of the loss of red blood cells through anemia or a microcytosis. If the microcytosis is present it is due to a lack of iron content. Therefore hypotension may be the result of an anemia with or without microcytosis or microcytosis without an anemia or the two combined.

4. Iron is a factor in kidney damage as has been shown by the total blood iron, urine, and plasma iron determination, and albumin in the urine varied with the iron content of the urine.

5. Blood pressure in cases of severe nephritis will vary from the actual blood pressure obtained by the blood findings, but a definite determination of the pressure produced in kidney damage can be estimated by subtracting the actual pressure by blood findings from the instrument pressure.

6. The treated cases in which results were obtained showed an increase in the red cells, a decrease in the cell size, in hemoglobin, in iron content of the cells, plasma and urine with a corresponding fall in systolic and diastolic blood pressure.

REMARKS

Two types of hypertension have been described: one the result of a macrocytosis and hyperchromia, and the other the result of nephritis associated with macrocytosis and hyperchromia.

All cases reported with the exception of three received marked benefits by reducing the size of the red blood cell. The two nephritic cases still have some elevation of pressure; one uncomplicated case has failed to respond to treatment.

One case has been reported in which a denervation was done in an attempt to reduce his pressure. True there was a loss of about 20 points of blood pressure; however, the method used in determining blood pressure in this series of cases gave an accurate measurement. It may be stated that this man had some anemia which probably was the result of the reduction in pressure as well as the denervation. Although I do not know the red blood picture at the time of operation, it is safe to assume that it was greater at that date than at the time I saw him.

It is not the object of this report to convey the idea that arteriosclerosis and nephritis do not play

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a part in hypertension. It is to bring to your attention the fact that the enlargement of the red blood cells is the one most common cause, a factor heretofore never considered.

There is much to be learned in the treatment of these cases. The two essential points are, first, to reduce the red cells to normal size, and, second, to increase the number of red cells if an anemia of any degree is present. The diet will have to be changed from time to time in all probability, and yet some other factor, unknown at present, may be found that will influence the red cells. Liver may play its part. Certain observations with this are now being conducted. It is my hope and belief that when the final paper on this is published, it will give a more logical and satisfactory method of treatment.

Before closing, I wish to emphasize that no case of hypertension should be treated in the manner described until an accurate survey or the number of red cells, the iron content, the plasma and urine iron and the size of the cell has been obtained. Failure to carry out this procedure before treatment is instituted would be as illogical as prescribing insulin for a diabetic before obtaining the content of the sugar in the urine and blood.

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Driver Building.

ROENTGEN DIAGNOSIS OF PNEUMOPERITONEUM—WITH REPORT OF A CASE OF RUPTURED DUODENAL ULCER WITH SPONTANEOUS RECOVERY

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When a roentgen examination shows positive signs of a perforation somewhere in the gastro-intestinal tract in an acutely ill patient there can be no doubt as to the advisability of immediate operation. We are here reporting, however, a case of perforated peptic ulcer, discovered several days after the rupture had occurred, in which the patient made complete recovery without operation.

Our patient, H. R., was a white male, age 40, with a history suggestive of peptic ulcer extending over a period of twenty-six years.

On September 14, 1933, he suffered an acute attack of pain in the upper abdomen. He states that the onset was sudden and that he was unable to get a deep breath because breathing increased the pain. There was no vomiting. His family physician relieved him with morphia, and requested a roentgen examination of his gall-bladder. At the time, the patient was at his home in the country and, since he was much better the following day, he postponed the request for the examination until the morning of September 17, 1933, three days later. At this time he was comparatively free from pain, his temperature and pulse were normal and he stated that he felt quite well except for the soreness in his upper right abdomen. His gall-bladder was examined, as requested, and since it was found to be normal, we asked him to return for an examination of his stomach and duodenum. This he did the following day, and during the fluoroscopic study air

was discovered between his diaphragm and liver. This was confirmed by a chest roentgenogram. At the same time a typical "bird-flying" type of ulcer defect was seen in his duodenum. From these findings it was obvious that the patient had suffered an acute perforation of a duodenal ulcer four days previously, but, since he was quite well clinically, no operation was performed and, following proper diet and medication, he is in good health today, about two years after the perforation occurred.

While this patient survived without an operation, it is generally conceded that to postpone surgery in the acute stages of a perforation anywhere in the gastro-intestinal tract is very likely to result in the death of the patient. The importance of immediate roentgen examination of patients suspected of having a perforation is therefore quite obvious. The procedure takes only a few minutes, as a good roentgenogram to include the diaphragm can be made at the bedside.

Fig. 1.—A. Roentgenogram of diaphragm. A and B, collections of gas in peritoneal cavity between diaphragm and liver on patient's right and between diaphragm and stomach on the left. C, gas bubble in stomach.

Vaughan and Singer[1] have called attention to the fact that it is unnecessary to place the patient in an erect posture, demonstrating clearly that the examination can be made with the patient lying on his left side. They recommend placing the patient on a stretcher in this position and rolling him behind a fluoroscopic screen. They also state that this latter position facilitates the escape of gas which aids in the roentgen diagnosis. But since it is better for air to escape into the peritoneal cavity rather than fluids or solid matter, and since ulcers usually occur on the lesser curvature of the stomach or doudenum, we believe that a peptic ulcer patient with suspected perforation should be kept constantly on his left side with a moderate elevation of the upper half of his body and that he should be kept as quiet as possible. In this position a diagnostic roentgenogram can easily be made at the bedside without moving the patient to the fluoroscopic room. Furthermore, in the detection of small quantities of gas in the peritoneal cavity films are more accurate than the fluoroscope.

Pneumoperitoneum can be detected radiographically in practically every case in which even a few c.c. of gas escape into the peritoneal cavity but one should not lose sight of the fact that perforation sometimes occurs with the escape of fluids or solid matter accompanied by little or no gas, and it should be remembered that gas is absorbed from the peritoneal cavity quite rapidly. Therefore, the failure to find a pneumoperitoneum does not exclude a perforation. Our experience up to this time leads us to believe that it can be found in approximately 80 per cent of the cases of acute perforation occurring in the gastro-intestinal tract, provided the roentgen examination is made within the first few hours.

In the case reported above no gas was present under the diaphragm forty-eight hours after it was first discovered there, but because gas was present for at least four days following the perforation we know that a large quantity escaped at the time of the rupture.

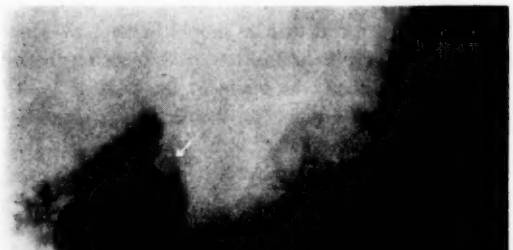

Fig. 1.—B. Roentgenogram of stomach and duodenum. The filling defect in duodenum was constant at the fluorscopic examination and upon the films.

Fortunately, a barium meal is not necessary in roentgen diagnosis of pneumoperitoneum. It would, of course, be indispensable if the exact location of the rupture was required, but this information is not absolutely essential, and barium should never be given until it is reasonably certain that the perforation has been sealed.

Synopsis: (1) A case with spontaneous recovery from a perforated peptic ulcer is reported. The diagnosis was made by roentgen examination four days after the perforation occurred.

(2) While this patient was fortunate enough to recover, roentgen examination followed by immediate operation is advocated in the early stages of cases suspected of having a perforation anywhere in the gastro-intestinal tract.

(3) In order to minimize, as far as practicable, the escape of fluid and solid matter, a patient suspected of having a perforated peptic ulcer should be kept constantly on his left side with the upper half of his body elevated.

(4) In the above position a roentgen diagnosis of pneumoperitoneum can be made with a portable machine without moving the patient, and by the roentgenogram smaller quantities of air can be detected than by the use of the fluoroscope.

(5) No barium should be given until it is reasonably certain that the perforation has been sealed.

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HEART-BLOCK—COMPLETE AURICULOVENTRICULAR DISSOCIATION AND INTRAVENTRICULAR BLOCK IN A CASE OF RHEUMATIC HEART DISEASE.*

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Heart-block in man was first recorded in 1875 by Galabin who described a case having a ventricular action of 25 to 30 beats per minute and obtained excellent curves showing the complete independence of contractions of the auricles and ventricles. In 1899, both Wenckebach and His described heart-block in man and suggested that it was caused by a lesion in the auriculoventricular bundle. Hay, in 1905, was the first to find post-mortem changes in the auriculoventricular bundle in a case of heart-block clearly recognized during life.

Any abnormal delay in the conduction of the impulse from the auricle to the ventricle through the specialized auriculoventricular conducting system constitutes heart-block. When the defective conduction is slight, it is shown by a prolonged A-C

*Read before the Richmond Academy of Medicine, April 9, 1935.

interval in the venous curve and a prolonged P-R interval in the electrocardiogram. Such a slight degree of block is the most frequent of all types, but such cases are usually not recognized unless graphic records are taken. When the grade of block is higher we get what is commonly called "dropped beats," that is, the intervals between the auricular and ventricular contractions gradually lengthen until the point that there is a failure of response of the ventricle to the auricular stimulus and the ventricle does not contract. This procedure may be repeated at regular or irregular intervals. When the ventricle more frequently fails to respond, a simple ratio between auricular and ventricular contractions may be established. The most common ratio is 2:1, but occasionally we find a 3:1 or 4:1 ratio, and the ratio may change from time to time in the same patient. Such above-mentioned types of heart-block are known as partial block. The final grade of block is reached when none of the impulses originating in the sinoauricular node pass through the junctional tissues, and hence the ventricle is not governed by them but takes up its own rate and rhythm from impulses arising in the junctional tissue. Such a grade of block is called complete heart-block, or complete auriculoventricular dissociation. Very rarely there may exist double types of block, and such a condition was found in the case I am going to report; that is, the impulse which arises in the junctional tissue and stimulates the ventricle to contraction is not conducted normally in the bundle branches, but is delayed in one of the other branches, and hence we get intraventricular block.

Etiology.—Auriculoventricular block may be caused by temporary toxic or functional conditions or by permanent organic disease, or a combination of the two. In the former class of causes are excessive vagal stimulation, asphyxia, digitalis and quinidine poisoning, and the temporary effects of certain diseases, such as rheumatic fever and diphtheria; in the latter class the most frequent cause is coronary disease; less frequent causes are syphilis, rheumatic fever, diphtheria, tuberculosis, tumors, and congenital heart-block.

Frequency.—In 9,000 cases presenting cardiac symptoms having electrocardiograms done at the Massachusetts General Hospital, 581 cases showed some degree of heart-block; but the block was complete in only seventy-six of these cases.

Sex.—The male sex shows permanent heart-block twice as often as does the female. The incidence of temporary block is equal in the two sexes.

Age.—Ninety per cent of the higher grades of permanent block occurs in patients over fifty years of age.

Prognosis.—Permanent heart-block, even the milder degrees such as "dropped beats," is always a serious manifestation, as it usually indicates a diffuse affection of the muscle and not merely a pathological condition of the bundle. Lewis states, "Most patients who present persistent heart-block die within a few years, whether it is of milder or severe grades, and whether syncope occurs or not."

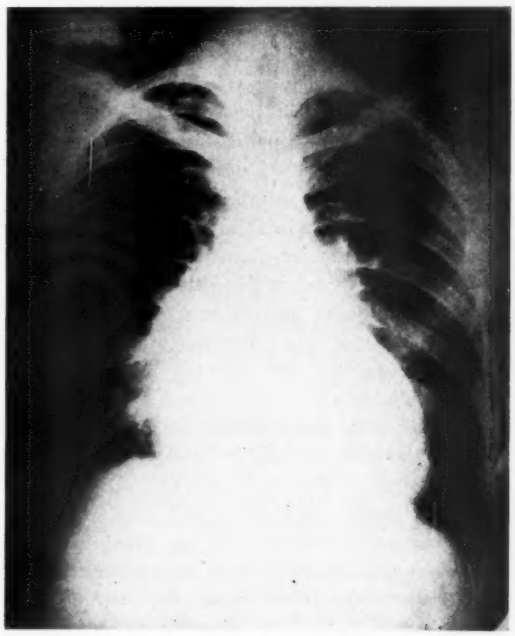

Fig. 1.—Teleroentgenogram of chest showing congestion of the hiluses of the lungs and marked enlargement of the heart.

CASE REPORT

Mr. E. T. B., white, male, age twenty-four years, was perfectly well and able to carry on strenuous work until an attack of rheumatic fever eight and one-half months prior to the time I saw the patient in consultation. At the time of the rheumatic fever the patient was in bed about one week and had tachycardia, aching pains, and fever. He did not have acute joint symptoms, but several doctors who saw him stated that he had rheumatic fever. He

returned to work but had an attack of paroxysmal tachycardia lasting about twenty-four hours. Patient was unable to return to work again until about four months later. After working eight days he was walking down the street when he suddenly became unconscious. Dr. McLemore was called and stated that the patient's heart rate was normal. In the following three days the patient had several dizzy spells but no more unconscious spells. At the time of the first visit the patient complained of dyspnea on slight exertion, fatigue, sore throat and vague epigastric discomfort.

Past History.—This was essentially negative; no history of rheumatic fever, growing pains, chorea, tonsillitis, or diphtheria.

Physical examination revealed the following findings of interest: Tonsils, hypertrophied and chronically inflamed. Lungs: normal findings on auscultation and percussion. Heart: definitely but not greatly enlarged, the supracardiac dullness was 4 cm.; right border dullness in the fourth interspace was 4 cm.; left border dullness in the third interspace was 5 cm., and in the fifth interspace 11 cm. The maximum apex impulse was 10 cm. to the left of the midsternal line. Rhythm was regular and the ventricular rate was 37 per minute. There was no pulse deficit. Aortic second sound was split and louder than pulmonic second sound. Sounds at the apex were very distinct and divisions naturally accentuated due to slow rate. Distinct but somewhat muffled auricular sounds could be heard and were not associated with the usual first and second sounds. A varying late diastolic and presystolic lowpitched, distant, rumbling murmur was heard at the apex. No diastolic murmurs were heard at the base. Blood pressure was 114/76. After exercise the ventricular rate went up to 44 but soon returned to 37. There were no signs of congestive failure.

Teleroentgenographic and orthodiagraphic studies revealed a markedly enlarged heart, both right and left sides being enlarged, definitely enlarged left auricle, normal aorta, and definite hilus congestion.

Electrocardiogram showed complete auriculoventricular dissociation (auricular rate 94, ventricular rate 34); abnormal T waves and intraventricular block.

Laboratory reports revealed the following: negative blood Wassermann, normal blood count and differential; urinalysis, heavy trace of albumin, sugar negative, hyalin and coarsely granular casts.

Clinical Course.—Patient gradually became worse and it seemed that he was unable to get rid of his sore throat, sinusitis, and tonsillitis, which he developed a few weeks after visit here. He developed frank congestive failure and died approximately one year after the attack of rheumatic fever. No post-mortem examination was allowed.

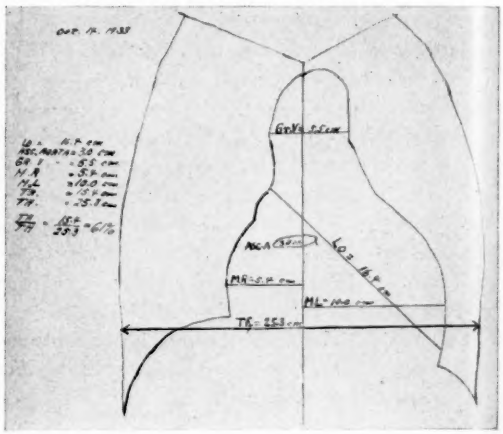

Fig. 2.—Orthodiagram showing marked enlargement of hea the transverse diameter of the heart being 61 per cent of t internal thoracic diameter. The diameter of the ascendi aorta is normal.

Treatment.—Since the patient was suffering from circulatory embarrassment which was thought to be connected, in part at least, with the slow ventricular rate, and since the slow ventricular rate did at times cause distinct uncomfortable symptoms, it was decided to start treatment to try to overcome the block. Thyroid extract, grains ½, three times per day, was first tried but this had no effect and was stopped at the end of one week. Barium chloride, grains ¾ after each meal, was then tried; this also failed. Ephedrine sulphate grains, ⅜, three times per day, was then started, and I saw the patient after about the third day of this medication, at which time the ventricular rate was around 55 to 60. It seemed that the increase in rate was due to frequent ventricular extrasystoles rather than to an improvement of the A-V conduction. By using ephedrine and varying the frequency of administration, we were able to keep the ventricular rate up to 60 to 80 throughout the remainder of the patient's life. The apical mitral murmur became most distinct when the heart rate kept around 60.

Remarks.—The case reported seems to be of interest because it demonstrates a number of unusual points. I believe that the patient did have rheumatic disease, although I realize that several other conditions have to be considered. I sent this case report up to Dr. Paul D. White, of Boston, and I should like to quote his opinion as gained from his letter: "I agree that the most likely cause of the final illness and death was a pancarditis involving the myocardium chiefly. Active rheumatic infection would best account for this. There are two or three other things, however, that must be considered, one of which would be diphtheria which would be superimposed on chronic or subacute rheumatism; a second possibility would be subacute bacterial endocarditis also superimposed, and a third would be an unusually early coronary involvement. However, your man evidentally did not have clinical symptoms indicating coronary thrombosis or embolism, subacute bacterial endocarditis or diphtheria. Therefore, an acute rheumatic pancarditis with the unusual complication of complete heart-block will best explain the case."

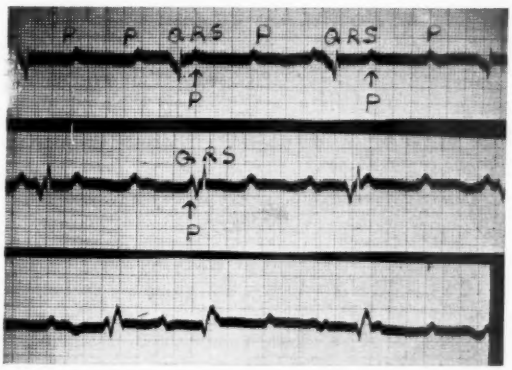

Fig. 3.—Electrocardiogram showing complete heart-block (complete auriculoventricular diasociation), auricular rate 94, ventricular rate 34; also intraventricular block and abnormal T waves. Note: P waves indicating auricular activity occur without relation to QRS waves of ventricular activity. QRS interval prolonged to .16 second, thus indicating intrapentricular block.

It seems that this patient had no symptoms of rheumatic infection until one year ago; however, we cannot be sure of this as rheumatic infections often occur without characteristic signs or symptoms; following the rheumatic fever the patient was never able to overcome his rheumatic infection. Complete permanent heart-block in a patient at the age of 24 suffering from rheumatic heart disease is very rare; this patient also had intraventricular block tending to true bundle branch block, and this combination is extremely rare. Clinically, the auricular contractions could be definitely heard occurring between ventricular contractions and when the auricular contractions occurred just prior to ventricular contractions, there was a definite presystolic or late diastolic murmur. This sign, when taken into consideration with other factors in this case, makes the diagnosis of mitral stenosis resonably sure. Thyroid extract and barium chloride had no effect on the ventricular rate. Atropine did not have any effect on the block, and a single subcutaneous injection of adrenalin seemed to be without effect on the ventricular rate, these observations being checked by electrocardiograms. Ephedrine sulphate was effective in increasing and maintaining an increase in ventricular rate apparently through the excitation of frequent ventricular extrasystoles.

Note: I wish to express my sincere appreciation to Dr. W. T. McLemore, of Courtland, Va., who kindly referred this interesting case to me and thoroughly cooperated with me in the handling of this case.

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Professional Building.

THE ACUTE ABDOMEN.*

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Before entering upon the subject matter of my discussion, I wish first of all to thank you for the honor and the privilege of taking part in your programme. Secondly, I fear that I am not able to tell you anything that you do not already know, but I hope, at the same time, that my viewpoint, in any differences it may show from yours, may be of some value.

There is no other condition in medicine that requires greater diagnostic acumen or wisdom in judgment than "the acute abdomen." While this is a general term I use it as referred to acute appendicitis, cholecystitis, pancreatitis, diverticulitis, rupture of stomach or intestines, rupture of spleen or liver, rupture of urinary bladder, intestinal obstruction, acute pelvic inflammatory disease, twisted ovarian cyst, torsion of omentum or ruptured ectopic gestation. While all of these conditions deal with definite organs complicated by either infection or hemorrhage, they are, however, all intimately related to the peritoneum. All of the above conditions usually manifest themselves ultimately as peritonitis, at times as abscess, and these are the pathologic results and the causes of death.

This group of conditions termed under the poor term, "acute abdomen," present a problem for early and correct diagnosis as the time interval between diagnosis and treatment is an important factor in the patient's recovery.

From the standpoint of aids in making diagnosis there are several factors which are highly important. First of all, there must be an appreciation by the physician of the seriousness of the patient's condition from observation when the patient is first seen. A great amount of information may be gathered at that time purely by getting an impression of the patient's general appearance. For example, is the patient in pain, has the patient a pinched, drawn expression about the face, is the patient in shock, etc. This first impression will help tremendously in guiding you to a proper diagnosis inasmuch as it makes you realize the seriousness of the patient's condition. Accepting the fact that the patient is in pain and is shocked, we must then realize that after all these are secondary to some primary condition.

We are then in a position of a Sherlock Holmes, something has happened and we are to find out what caused it to happen. We lay our plans, and the first thing is a carefully taken history of the *subjective findings* (symptoms) of the patient at hand. The importance of this investigation cannot be stressed too much. If we consider subjective pain we must find out whether the pain is localized, whether or not it radiates, is it stab-like or is it cramping, does it come intermittently or is it constant, has it been getting worse or is it subsiding. This is just an example of one symptom and how it must be thoroughly investigated. All symptoms or subjective findings must be studied in the same manner.

Objective findings are next appraised. The most important of these is tenderness which is pain caused by applied pressure. Is this tenderness localized in one area or is it generalized. What is the geographical location of the tenderness.

Tenderness can be a real clue. If over the upper right quadrant perhaps it means cholecystitis; over the lower right quadrant appendicitis. Generalized abdominal tenderness means a peritonitis. Thus, as we investigate further, the picture becomes clearer.

Rigidity is another important feature. By rigidity I mean the ability of the muscular wall of the abdomen to contract and form a protective wall for the irritated or infected peritoneum lying beneath it.

Thus we have investigated the three cardinal features of the Acute Abdomen. Pain, tenderness, and abdominal rigidity. This is done, as seen, by studying the previous history, the symptoms experienced by the patient, and the physical signs brought to light by the physician. There is one more weapon in our armamentarium for aid in diagnosis and that is the laboratory. This can be used or abused. I am afraid a number of the older physicians use this

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aid too little while the young physicians depend too much on it. There has been a great tendency in recent years for men to get into the rut of depending almost solely on laboratory findings to make a diagnosis. If this tendency should persist the medical profession is due for a set-back. I recall seeing a case in consultation with a doctor not long ago which brings out the so-called laboratory type. The patient had been under observation of this physician for three weeks. The symptoms were low back pain, loss of weight. Every known test in the chemical laboratory had been done and no diagnosis reached. On pulling the covers down for inspection of the body, a tumor the size of an orange was presented in the left groin, proving to be a sarcoma with retroperitoneal involvement. This is one example, to show how, by disregarding the five senses and depending on laboratory findings, one may become confused. I should think that 90 per cent of the diagnoses of "the acute abdomen" can be made by a careful history (symptoms) and physical findings.

The laboratory has, however, a very important place as an aid in diagnosing this small group of cases which are still confusing after a careful history has been taken and a careful physical examination done. This is true in the diagnosis of an early jaundice by icterus index and may help us in the diagnosis of a common duct obstruction due to stone, or pancreatitis or carcinoma of the head of the pancreas. A urine helps in the differentiation between a stone in the right ureter or kidney and acute appendicitis. A number of other laboratory tests are important in regards to differential diagnosis. The laboratory also has its place as an aid in the pre-operative and post-operative treatment of this group of cases, as I will discuss later. I cannot emphasize too strongly, then, the importance of three factors in the diagnosis of the Acute Abdomen. They are the careful history of pain, a painstaking examination for tenderness and rigidity, and the carefully selected use of laboratory tests. One alone is not sufficient but the combined knowledge is necessary for the deduction of a true diagnosis. To be able to arrive at a real diagnosis, therefore, it is necessary for every physician to keep abreast the times with modern aids to diagnosis, always remembering that there are two highly important methods in diagnosis never to be slighted or forgotten—a complete and careful history and a thorough physical examination.

Since pain is the major symptom in these acute abdominal cases it demands clear interpretation. I believe in accepting Morley's differentiation of visceral from somatic pain because it offers a better explanation of the mechanism involved in direct and referred pain. "Visceral pain is noticed about the umbilicus in strangulation of the small intestine, in the mid-hypogastrium in obstructing carcinoma of the transverse colon, and in the mid-epigastrium in biliary colic. Somatic pain must be localized on the surface and hence is truly referred, as in the case of localized pain and tenderness in the right iliac fossa in appendicitis, of pain in the back from a duodenal ulcer with posterior adhesions, and of pain in the upper abdominal wall associated with pleurisy. The early visceral type of pain is essentially an obstruction to a tube, the natural reaction of such an organ to injury, whereas the somatic type of pain is due to a direct irritation of the sensitive peritoneum."

I would like now to return for a minute to laboratory examinations as an aid in diagnosis. I believe that the procedures of blood count, urine analysis, blood chlorides, bleeding and coagulation times, and sedimentation tests are all highly important guides not alone as an adjunct in diagnosing but also to give us an index as to the patient's general condition. For example, the acetone and diacetic acid in the urine warns us of an acidosis, blood chloride changes of dehydration, etc. Our care of the individual patient can be greatly enhanced by this knowledge. There are, I believe, many cases operated upon by two surgeons doing the same type of operation under the same anesthetic in which one patient gets well while the other dies. Taking into account that all individuals are different, I still believe by the aid of laboratory tests and being guided in our treatment by them, such as the use of chlorides, glucose and saline, a number of the mortalities can be reduced. While the operative technique, I believe, is highly important I also feel that the pre- and post-operative care cannot be too greatly emphasized. The laboratory is the barometer that helps guide us through the storms of toxemia, dehydration, and the subsequent prevention of mortality.

The X-ray at times is helpful in guiding us to

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a diagnosis. An example of this is the differentiation between a stone in the right kidney and an acute appendix lying upward in the external pericolic groove. A flat plate of this abdomen may reveal a stone shadow and help in our decision.

The leucocyte count is an important aid in diagnosis, and while at times it may present a confusing picture nevertheless in the great majority of instances is helpful. An example of its help occurred about two weeks ago to me. At a children's hospital there was a child admitted to our service with a diagnosis of acute appendicitis. It had a twelve-hour history of generalized abdominal pain, temperature of 102°, nausea and vomiting, bowels slightly constipated, pulse 120. Examination revealed generalized abdominal tenderness but no localization associated with diminished peristalsis. The urine was negative. The blood count showed 8,000 leucocytes with 85 per cent polys. I decided to watch the patient after this blood count. Within twenty-four hours the patient was entirely well with normal temperature. The four days following we had eight similar cases admitted; all had about the same counts and all were well within thirty-six hours. I feel the blood count was a great help in these cases. We are now working these cases up to report to the Pediatric Society next fall.

Now we must realize that after a careful history, examination and laboratory reports with their deduction resulting in a diagnosis, another real problem confronts us. This question is whether an immediate operation should be done or a delay for preparation. By delay I do not mean ten or twelve hours but one of only an hour or two. There are ofttimes cases which can be made much better operative risks by a transfusion before operation, or more especially cases of obstruction where there has been a loss of chlorides by vomiting, when infusions of saline with glucose are very beneficial. Patients at times I feel should be allowed an hour after admission to a hospital to recover from transportation. These decisions must be left to the surgeon in charge and vary with each case. The only rule one can set for "the acute abdomen" is an early diagnosis and early surgical intervention. The late John B. Deaver felt so strongly on this point his statement concerning it was, "In the acute abdomen the greatest aid to diagnosis is the aseptic scalpel applied early." With regards to early surgical treatment of the Acute Abdomen, George P. Muller has aptly stated that "Gunshot and stab wounds represent one extreme and intestinal obstruction the other, in the matter of time, with acute appendicitis in between."

To consider all of the conditions responsible for "the acute abdomen" in one paper is indeed impossible. I will therefore take four conditions as representative of types and discuss them to represent the care of these groups. These four acute abdominal affections requiring immediate surgical treatment are appendicitis, perforated ulcer, intestinal obstruction and traumatic injury, and we may use the lessons derived from their study as examples for the treatment of the others.

Of all the conditions classed as causative factors for "the acute abdomen" the outstanding one is acute appendicitis. This disease has received an increasing prominence in our medical literature and civic propaganda but has it received its proper share. We hear, for example, the plea for funds to carry on cancer research and a great national educational programme for instruction of the public about seeking early advice about lumps and loss of weight, etc. Do we, however, hear all of the shouting about acute appendicitis in a national educational plan. We, in Philadelphia, have perhaps heard more on public instruction regarding pain in the abdomen as there has been a campaign carried on there. Now with all of the shouting to the public about cancer and practically no advice to the public that appendicitis, we must realize that about 50,000 persons die in the United States annually of carcinoma at an average age of 58 years, while 30,000 persons die each year of acute appendicitis at an average age of 26 years. The 30,000 deaths at 26 years represent a part of the population who have just finished training and are about to produce, while the 50,000 at 58 years have almost finished their production period. I feel, therefore, that appendicitis, as far as the public's information is concerned regarding its seriousness, is sadly neglected and does not hold its proper place in the sun. If we consider Bower's figures for Philadelphia, we see the following: In 1932, in ten of the largest cities of Pennsylvania, exclusive of Philadelphia, the mortality rate from acute appendicitis was 20.5 per 100,000. In the same year the mortality rate in Philadelphia was 11.3 per 100,000. What is the answer? Is

the surgery in Philadelphia better than in other cities? We do not feel that it is. We believe, however, that this lowered mortality rate is due to a two-year course of education of our public. This has been done through posters in drug stores and stickers on physicians' envelopes and also sent to school children. These stickers advise of the seriousness of any abdominal pain lasting six hours or more, warning about the use of cathartics, and advising early consultation with the physician. 600,000 of these stickers were sent to about 3,000 physicians in two years. This programme was sponsored by the Philadelphia County Medical Society and endorsed by the Department of Public Health.

We thus feel, then, that in the high mortality rate in appendicitis, the patient is more often to blame than the physician, although the physician too often is not firm enough in insisting upon immediate surgical care of the case but yields under pressure to the wishes of the family.

It is easy in most cases to diagnose a case of acute appendicitis, and this is especially true in the male. With a person previously well who complains of abdominal pain usually starting in the epigastrium, then localizing in about six hours in the right lower quadrant, associated with nausea and vomiting and a tendency toward constipation, about 80 per cent of the story is present for the diagnosis. The examination usually reveals a mild temperature, 99° to 100°, pulse rate of 110 to 120. Localized tenderness and slight rigidity in the right lower quadrant with two signs used by the late John B. Deaver of pain in the right lower quadrant on deep inspiration or coughing, these with an increase in the leucocyte count complete the picture. In the female there must be a finer accounting as an acute pelvic inflammatory disease, ruptured extra-uterine pregnancy or a twisted ovarian cyst may complicate the diagnosis. With, however, a carefully taken history, pelvic examination, blood count and sedimentation test the differentiation is made comparatively easy. Acute salpingitis is the one condition which does not need immediate operation and hence an error in differential diagnosis is not of serious moment.

The difficult case to diagnose is when a history of appendicitis is present with a question of pyelitis or acute cholecystitis. Severe abdominal pain as a threshold symptom is almost unheard of in pyelitis, nor is the pain in acute gall-bladder generalized in the beginning but localized to the epigastrium and stays in this general area unless later on a peritonitis occurs. A pelvic position of the appendix may give left-sided pain and tenderness. This confusing finding may be cleared up by a pelvic or rectal examination. Thus the diagnosis of acute appendicitis is fairly simple and as a general rule the treatment is only one and that is not to procrastinate by the use of ice-bags, etc., but to operate. The time for operation is immediately on making the diagnosis.

In regards to the second of our type cases the acute perforation of a duodenal ulcer, I know of no other condition in the acute abdominal group that is so easily diagnosed. This condition is usually diagnosed early as the pain is so severe the physician is called immediately. On arriving he usually gets a history of severe pain coming on after a meal or while at work. The typical board-like rigidity so pathognomic of perforation leads the physician at once to the diagnosis.

The confusing factors may be acute pancreatitis, acute cholecystitis and acute perforation of an appendix. While the tendency recently is to delay in operation an acute pancreatitis, nevertheless there is another tendency for early operation on the acute cholecystitis cases. Appendicitis is a definite indication for operation. Therefore, in an abdomen with sudden sharp pain, board-like rigidity and an associated shock, our indications for operation are 100 per cent. If I may refer again to a statement of the late John B. Deaver when he was asked at a meeting of the Southern Surgical Society how he made the diagnosis in an acute perforation of a duodenal ulcer he said, "I never have to make one, my internes make them for me." I believe the greatest error in these cases of perforation of an ulcer comes with operating these cases for acute appendicitis and finding a slightly injected appendix and a mucoid-like fluid which gives us the clue to explore the upper abdomen.

The demand for early operation in these cases is paramount. If operated early there should hardly be any mortality. They do exceedingly well. The type of operation must be decided upon by the surgeon at the time of operation—whether just to oversew the perforation or do the combined over-sew

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plus a posterior gastro-enterostomy. The question of drainage is a debatable point and must be decided by the individual surgeon.

Bands of adhesions, carcinoma of the colon and hernia are almost invariably the causes of intestinal obstruction in the adult. Volvulus intussusception are also possibilities. Intestinal obstruction is indeed an acute surgical emergency. Early diagnosis followed by early operation is demanded in these cases. In seeing a patient with a history of a previous abdominal operation with a colicky type of pain which is increasing in severity, nausea, vomiting, rapid pulse, the first thought should be of intestinal obstruction. Pain in the back from mesenteric pull is a fairly constant symptom.

On examination of this patient we find generalized tenderness with sometimes local tenderness over the region of the obstruction. We find hyper-active peristalsis early with a rather high-pitched note. If we understand the mechanism of the symptoms in obstruction it helps tremendously to interpret the picture. Obstruction, of course, is the blocking of a hollow tube with subsequent interference with its blood supply. Increased peristalsis with pain, distention and vomiting are the manifestations of the former, while increasing temperature, pulse rate and sepsis are indications of the latter. In this type of case I am speaking of the complete acute obstructions.

These obstruction cases need considerable pre-operative care, and as early operation is advisable is calls for rapid work. At the Lankenau Hospital we routinely have every obstruction case have a gastric lavage after which a Jutte tube is passed into the stomach and left in place during and following operation. The reason for this is twofold. First, it prevents vomiting of stomach contents under anesthesia with inspiration of the material into the lungs, and, secondly, it takes care of gastric drainage post-operatively and may be connected with a Wagensteen apparatus for small bowel drainage. The next consideration in these cases is to build up the patient's fluids and chlorides which have been lost by vomiting. We believe an infusion of normal saline 1,000 c.c. is of paramount importance as a pre-operative procedure. The laboratory is a great aid in guiding us as to the continued need for chlorides in these cases.

In regard to hernia as a cause for intestinal obstruction I see no reason why time should be lost in trying to differentiate between an incarcerated hernia or a strangulated hernia. If signs of obstruction are present, I would operate and not waste time on an academic discussion.

The history of an obstruction is an important factor in guiding up to a correct diagnosis. As an example of two types, I present the following: A patient having had a previous operation, colicky pains, nausea, vomiting, distention, no fever, no leucocytosis and active peristalsis, the assumed diagnosis is intestinal obstruction due probably to adhesions. On the other hand, an elderly person with attacks of indigestion, vague cramps, increasing constipation with perhaps some diarrhea, increasing distention with some vomiting, the diagnosis is intestinal obstruction probably due to a carcinoma of the colon. This differentiation is more important for the surgeon, however, and helps him decide whether to do an exploratory for adhesions or just a cecostomy to primarily relieve the obstruction in carcinoma before doing his resection. I believe most of us appreciate the extremely poor risks that most obstruction cases present and guard against too much surgery or exploring at the primary operation.

Traumatic injury to the abdominal contents is our last type. These cases are constantly increasing in every hospital in the country. Probably the increased speed of motor travel and the large number of Dillinger protégés are responsible for this increase. They indeed present a varied picture of possibilities and are most interesting cases from the standpoint of diagnosis, although, as a rule, too much time cannot be spent in pre-operative discussions and postponements. When we have a traumatic injury to the abdomen without puncture there are certain types of injury to be thought of. They are rupture of the spleen, liver, bladder, kidney, intestine or hemorrhage from the mesentery. The outstanding guide is shock. This should be recognized immediately. Should a traumatic abdomen be brought in with marked pallor, shallow respiration, weak rapid pulse and low blood pressure, no time should be devoted to questioning as to what happened but immediate treatment of shock with immediate decision as to the surgical procedure. Operation should rarely be done with a systolic pressure 80 m.m. or less. Yet operation is necessary. Therefore, immediate treatment for shock is

started, and as soon as the pressure responds to treatment operation should be done. The sequence in this type of case is shock treatment, support against the loss of blood by infusion and transfusion, and operation. Each must follow the other as rapidly as possible because the mortality is directly dependent upon the hours of delay. In regards to rupture of the intestine the amount of peritonitis depends on the spilling of bowel contents. Since there is a spasm of the bowel primarily due to trauma immediate operation is essential.

The signs of a rupture of bowel, bladder, or hemorrhage are usually generalized abdominal pain, board-like rigidity, labored respiration and tenderness. A leucocyte count which is rising is a sign of value in hemorrhage, but not so in peritonitis since it takes many hours to manifest this. The red cell count is of little importance early in hemorrhage and thus cannot be used as a guide. Ruptured bladder may be ruled out by catheterization of the bladder and withdrawing urine. Urine should be examined for blood which then might suggest kidney rupture. Rupture of the kidney is diagnosed by location of tenderness and muscle spasm. These cases are rarely operated upon unless they develop a large retroperitoneal collection or urinary sepsis. They usually get well. Rupture of the liver is a very severe injury and often dies before operation can be performed. If the abdomen has been opened and active liver bleeding is present, sutures or packing is the treatment. If clotting has taken place, then the blood should be removed without disturbing the clots and the abdomen closed. In cases of rupture of the spleen the best treatment is the surgical removal immediately. This operation can be most difficult and demands good exposure and rapid surgery.

In gunshot and stab wounds, if the wound is a penetrating wound, exploratory operation is important. At times it is surprising how a bullet may enter and leave the abdominal cavity without much damage. We cannot, however, depend on this and operation should be done to explore the abdominal contents, taking great care on opening the peritoneal cavity to listen for escaping gas. One should always be prepared to infuse and transfuse these cases on the operating table if it is found necessary.

It is impossible in the short time to go into detail with regards to every condition causing "the acute abdomen." I only want to call attention to the physician and surgeon that today, to reduce mortality, he must be on the alert, ready to reach a diagnosis after careful history, complete physical examination and laboratory work. Do not delay in calling for surgical action. Delay is dangerous and may give cause for many regrets. Above all, do not consider the operation *per se* as the finished job, as many a desperate case has been pulled through by the active post-operative treatment chiefly in reference to fluids and chlorides. Operation as the rule holds true in conditions causing the acute abdomen. There is no alternative treatment. Ice-bags, enemata and purgatives have no action except that which is harmful. The responsibility rests squarely on the doctor; he must accept it, make his diagnosis and promptly act.

1914 Pine Street.

SOME REFLECTIONS UPON SCARLATINA.*

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This title was chosen because, in the time alloted to me, I am unable to read much more than a synopsis of any complete discussion of scarlet fever. The subject is too great, touches too many vital problems in our social structure, and presents too many problems for analytical consideration to undertake any more than my title calls for.

*Read before the Journal Club of the Physicians of Accomac and Northampton Counties, February 12, 1935.

Scarlet fever may be defined as an acute, infectious, self-limited and contagious disease, generally characterized by an erythematous rash of variable intensity, followed by desquamation, and accompanied with a sore throat of a general hyperemic type. No very concise definition can give the average reader an adequate conception of the nature of the disease; for in analyzing the many pictures of scarlet fever with their varying degrees of

intensity, the many complications to which it is subject, the various degrees of morbidity and gravity of each of these complications, and the various, dangerous sequelae of the disease for weeks or months after an attack, make a concise, comprehensive definition difficult indeed. To put the matter in a "nut-shell," it is sufficient to add to my definition that scarlet fever is an exanthematous disease, mostly of childhood, found in all degrees of intensity in symptoms and pathology, and subject to many dangerous complications and sequelae.

In considering scarlet fever the physician should have in his mind a typical picture of the disease, and then learn to make nice distinctions in differential diagnosis. He should also see the disease whenever it appears in the atypical form, or in its various degrees of intensity, or in the light of its complications or sequelae.

The Typical Case.—This usually begins three or four days, more or less, after exposure to the disease. The onset is sudden, often with a chill and headache; in infants, it often begins with a convulsion. There is usually vomiting. Fever soon rises to 103 or 104 F. or higher, and within twenty-four to thirty-six hours a bright rash appears like an erythematous blush, usually beginning in the lower part of the neck and upon the chest and spreading with various degrees of intensity over the entire body. Close examination of this rash will often reveal minute punctate spots at the hair follicles, and also in the throat upon the hard palate when the rash appears. The patient becomes restless, has more or less headache and a catarrhal sore throat. The latter is extremely red and painful upon deglutition. The nasal passages are also involved with this hyperemic condition. The tongue is at first coated in the center, red at the tip and sides and soon cleans off and becomes intensely red with prominent papillae—the so-called "strawberry tongue." The disease reaches its height of intensity usually on the fourth or fifth day, after which it gradually declines, the rash fading and all symptoms improving until the sixth, seventh or eighth day when the desquamation usually begins. Along with these symptoms the patient usually has, near the out-set, spells of vomiting and the stomach may be quite irritable. Sometimes he is annoyed with diarrhoea in the course of the disease. As desquamation starts, the patient is usually quite weak, pale and, at times, even prostrated; he is also generally more or less anemic. The latter feature is often well marked. Convalescence is by lysis, and is more or less slow. Desquamation continues usually from one to three weeks.

With this picture before us, we must ever bear in mind that all these symptoms are subject to considerable variation, according to the intensity of the disease, even in the typical and the moderately severe forms. In the mildest cases as well also as in the worst forms, many symptoms common to the disease may be absent or unrecognizable, as they vary greatly in intensity; they may be covered up, or lost sight of, in view of the many changes in the pathology or in the various complications that may arise.

Classification and Nature.—In considering scarlet fever, if I had the time to give anything like a comprehensive view of the subject, I would be inclined to give at least four classifications of the disease for analytical study and discussion: (1) The typical; (2) the very mild; (3) the moderately severe; (4) the very severe, including those with the worst complications, and the so-called malignant cases. Even the most constant symptoms in each of these classifications may show many changes or deviations from those found in the typical cases. Take, for instance, the erythematous rash: this may sometimes be found in patches, and the eruption may be macular, like in measles, or there may be small areas of vesicles. Again, the eruption may cover only small parts of the body, and in some rare cases not even be recognizable at all. This may be true in the very mildest cases or the very worst cases. Indeed, in some of the worst cases only slight evidences of the rash may appear upon the closest inspection, and even then only after the death of the patient (Holt).

Again, we may take the throat symptoms. These may represent far more than a slight hyperemia or the characteristic flush, so generally seen in the typical cases. The catarrhal symptoms may all be intensified. There may be spitting of filthy catarrhal secretions or even bloody mucus, more or less purulent, and in great quantities. I have seen this in cases of only moderate severity. In some cases the tonsils are greatly swollen, covered with gray patches, sometimes ulcers, varying not only in color, but in many degrees of inflammatory stages, even up to the point, in the severe types, of gangrene and extensive sloughing. In some moderately rare cases

these gangrenous spots sometimes slough through an adjacent artery and close the scene with a fatal hemorrhage. More frequently, however, there is a milder form of ulcerations, and, more generally still, a characteristic scarlatinal membrane of the streptococcic type. This membrane may cover the tonsils, the soft palate, the uvula and the fauces, sometimes extending into the eustachian tubes, setting up either a single or, more frequently, a double otitis, and not infrequently further complications, a mastoiditis or even a meningitis. This membrane, seldom invades the larynx like diphtheria, though I have known it to do so in a case that quickly ended fatally. In such cases, I will suggest here that care should be taken to exclude in our diagnosis the possibility of a diphtheritic infection also. Different shades of throat infections in scarlet fever, like other streptococcic infections, may be the source of a general toxemia or a septicemia. It may even be the source for a general pyemic condition. More frequently, however, in the moderately severe cases, the lymphatic glands of the neck are infected, sometimes intensely so and quite extensively, and often these infect the cellular adjacent tissues of the neck. Under these conditions, not infrequently abscesses develop. If the pus from these are not released by operative interference, the outcome is likely to be either a graver, general toxemia or a pyemia, or additional complications, such as a severe arthritis, or a pleuro-pneumonia, followed often by an empyema, or an endocarditis with a possible embolism, pericarditis, circulatory disturbances with a weak intermittent pulse, followed with more or less pulmonary edema. But the case may not stop here. The kidneys may become seriously infected, either from the general infection from the blood-stream, or, secondarily, from local infection from distant parts. In such cases we may have either a glomerulo-nephritis; or a cellular invasion of renal interspaces, possibly developing later in life, in some cases, into an interstitial nephritis; or we may have serious involvement of the cellular structure of the uriniferous tubules which, during desquamation, may even cause convulsions or coma by blocking the lumen of the tubules, thus producing a decided check in the natural elimination of urea. From other causes, we may also have suppression with convulsions and coma.

Again, another word in regard to the general toxemia of scarlet fever. This, as I have intimated, might be light or extremely severe. Many patients die early in the disease of a general streptococcic septicemia; others linger on, declining into a state of progressive anemia with extreme weakness and prostration, only to finally succumb to some of the many complications already mentioned. In some very rare cases symmetrical gangrene has been reported. This gangrene may appear upon the buttocks, the thighs and the arms, and so may close the life of the patient—with an offensive picture indeed. The exact pathology of these cases is said to be obscure (Holt).

Now a word about *Etiology*.—To my mind, this is still uncertain, though I admit for many years it has been conceded by the most noted bacteriologists that some strains of streptococci can be found in the secretions of the throat in practically all well-marked cases of scarlet fever in the latter part of the first week. This has appeared to many physicians as conclusive evidence as to the leading factor in its etiology. This view is also strengthened by the hemolytic features in the blood of scarlet fever patients, so generally found in well-developed cases, and the very common findings of streptococci in the blood stream of the septic cases. To offset this evidence of a purely streptococcic etiology it may be said that some years ago in thirty inoculations made by Dr. George F. Dick upon healthy persons with blood serum from scarlet fever patients in the early stages of the disease, and with filtered mucus secretions from the throats of these patients, and from cultures of streptococci taken from these same throats, not a single typical case of scarlet fever was developed in these inoculated persons (Weaver). Whether or not Dr. Dick has made any more recent experiments that will fully offset these, I am unable to say. Moreover, whether or not it can be established that some strains of the streptococci are the direct cause of scarlet fever, it is very generally conceded that they do contribute greatly to scarlatinal toxemia and are the direct cause of many of the dangerous complications. They are also frequently found in the blood stream of the septicemic cases. Now, in view of these facts, it seems to me most probable that scarlet fever, like influenza, is caused by a mixed infection, the most dangerous of which is some strain of the streptococcus. This view at present accounts for only one of the factors in its etiology.

Treatment.—This, in my hands, has been almost

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entirely symptomatic, and is similar to the treatment of other fevers of infectious origin, with especial attention to the throat, the ears, the heart and the kidneys. Each of its complications should be treated as they arise. Many of the mild cases need very little treatment. The severe cases with high temperatures should be treated with cool sponging, or baths, and in some cases with some of the mild antipyretics. In one of my cases of extremely toxic symptoms, very high temperature with muttering delirium, while sinking into a coma and supposed to be dying, the patient was relieved of these grave symptoms, almost like magic, by putting him in a cold pack. Following this his kidneys became more active, his temperature fell, and he made an uneventful recovery. Again, in some cases with complications surgery may be necessary. For instance, abscesses of the cervical glands, as abscesses elsewhere, should be opened and drained; and not infrequently a paracentesis, sometimes a mastoid operation, must be performed. Also following the complication of a pleuro-pneumonia an empyemic case must be drained. The same may be said in some of the abscesses in the kidney complications or sequelae. Here it is obvious that the most pronounced cases of streptococcic septicemia and the pyemic cases usually die; but some of the less severe forms of the disease with the above complications may be helped by timely surgery. Just here, however, the greatest precautions should be observed in this kind of surgery, as we have on record an outbreak of scarlet fever, following the operative procedure of draining a scarlatinal empyema in a hospital (Holt).

In this discussion of scarlet fever, I am unable to go into all the details of prominent features of the disease, or of its treatment, and so, in a general way, I will suggest the adoption of similar measures in the treatment that we usually observe in most of the infectious fevers, especially typhoid, pneumonia, influenza and the like, in regard to the hygienic conditions, diet, fresh air, and in the protection of others from contagion. In regard to diet, Dr. J. McCrae used to insist that this should be milk for about three weeks. Others of equal authority added to milk a mild farinaceous diet. It is generally conceded that the diet should be light, liquid or semi-solid with the elimination of heavy proteid substances. The patient should be isolated at the very start, kept quiet and in bed for a week, more or less, after fever and all the dominant symptoms have subsided. The physician throughout the whole course of the disease should be very watchful for the first symptoms of any of the many possible complications, and always bear in mind the not infrequent occurrence of another disease, as a possible complication, such as measles, pneumonia, influenza, facial erysipelas, varicella, variola, even typhoid fever, and especially diphtheria. The latter is a frequent complication in such cases as present a membranous angina. Moreover, in cases where we have this latter complication, diphtheritic antitoxin should be administered immediately, as in a case of simple diphtheria alone. I once followed this course in a severe case of this mixed infection with most excellent results. In this case the grayish membrane had even invaded the nares and could easily be seen all over the mucous membrane in both nostrils. Following this almost magic success, I have given diphtheritic antitoxin, for its phagocitic action, in some pronounced cases of scarlet fever alone with apparently good results. I attributed the benefit to horse-serum.

This now brings me to *the specific treatment of scarlet fever with the serums.* For many years noted physicians, acting upon the assumption that streptococci are responsible for the dominant symptoms and toxicity of scarlet fever, have produced serums, from time to time, made from various strains of this micro-organism. One of the most successful of these physicians was Moser, of Vienna. He claimed to have used this in 400 cases with much success, and it was used in Europe quite extensively, many claims for its value being made, though it was not so well received in this country. Following Moser's claims, however, for the value of his serum, many of our American physicians have followed his example in producing serums from various strains of streptococci, and these have been tried from time to time with varying degrees of success. Bingher, of New York, and others, have departed somewhat from this. They tried and advocated the use of blood and blood serum, taken from convalescent scarlet fever patients. Many favorable reports have been given following the intra-muscular injections of this blood serum. Even Koch, some years ago, thought highly of this method of treatment in severe cases of scarlet fever of a high degree of toxicity. Following quite a number of these reseachers, in the experimental stages, Dr. George Weaver, of Chicago,

and the two Dicks, Geo. Frederick Dick and wife, have more recently contributed their observations, and the latter two their achievements with blood serums from convalescent scarlet fever patients, and the serums also made from strains of streptococci. Dick's serum has been highly extolled by some, while it is looked upon as no better than Moser's serum by others, and by others still, of doubtful value. I am not yet ready to pass an opinion upon its efficacy. A little knowledge of the history of many of these serums with their value, their frequent disappointments, and, in some cases, their positively harmful results, have put me upon the waiting list for more evidence of their value before I risk an opinion as to where they really belong. And so I appeal to the next decade for a more crystallized opinion of the medical profession at large as to their real value.

In conclusion, I may say that there are many more interesting features about scarlet fever, including its differential diagnosis, the many details in its relations to the public, its degree of contagiousness compared with other infectious diseases, its many minute details in each step in the varied pathology of its many possible complications and sequelae, also in the blood changes in the severe forms of sepsis. Likewise, we find much of interest in the features of hemolysis in the pronounced cases of progressive anemia, and in the characteristic features of leucocytosis, as found in scarlet fever—while absent in many other conditions of an infectious nature—and in the special forms of purpura, found in rare cases of scarlet fever either as a most distressing complication during the course of the disease, or, years afterwards, as a most dangerous sequel; but for brevity's sake, I must omit them in this paper for any further discussion.

REPORT OF A CASE OF ACUTE SUPPURATIVE APPENDICITIS COMPLICATED BY MULTIPLE LIVER ABSCESSES.

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This unusual case of appendicitis with multiple abscesses of the liver is interesting because it is believed the complication preceded the appendectomy and was not, as is usually the case, a late development. Secondly, it emphasizes the danger of not bringing cases of acute appendicitis to early operation; and, thirdly, it shows a complication of the disease not often encountered but which should be thought of whenever a case of appendicitis does badly and there is no other obvious cause to explain the symptoms.

CASE REPORT

Mr. J. A. L., age 19 years, was admitted to St. Luke's Hospital, August 18, 1934, having been referred by Dr. J. K. Richardson with a diagnosis of acute appendicitis. Three days before admission he refused supper because he was not hungry. About 8 P. M. the same day he was seized with a sudden cramp-like pain in his epigastrium, which radiated over the entire abdomen. Shortly afterwards there was nausea but no vomiting. On the following morning, which was the day before his admission, he "took salts" on the advice of another physician. The first dose was vomited, but the second was retained with a resulting free purgation. At this time the pain and tenderness became more marked in the right lower abdomen; fever was present, and he felt chilly. During the next twenty-four hours he had three shaking chills. The last was about two hours before admission, at which time he was first seen by Dr. Richardson, who stated that his temperature was 104.2°. His past history was negative except for one mild attack of abdominal pain six months before.

When the patient reached the hospital his general appearance showed he was extremely ill. He was in a profuse perspiration and complained of chilliness when the bed clothing was removed for an abdominal examination. The lower right abdomen was exquisitely tender with slight rigidity on pressure. His white blood count was 20,800, with 90 per cent polys and 10 per cent lymphocytes. Uri-

nalysis gave negative findings. His temperature was 101.4°. The diagnosis of acute appendicitis was confirmed and at operation about two hours after his admission a gangrenous appendix was removed. The wound was closed without drainage. Dr. Budd's report on the appendix was as follows:

"An appendix is received which measures 10 cm. in length by 1-1/3 cm. in diameter. It is swollen, necrotic, enveloped in fibrin, somewhat angulated. Lumen blocked at base, widely dilated elsewhere. Filled with pus. No concretions. All coats necrotic. Diagnosis—acute suppurative appendicitis."

Shortly after returning from the operating room the patient had a chill, and his temperature again reached 104°. The fever soon subsided and he was thought to be doing well. On the third post-operative day he began to take the usual liquid nourishment. On the fourth day he had another chill. The abdomen was flat and not tender but his facial expression was bad and he looked acutely ill. His leucocyte count was 19,000, with 90 per cent polys. Numerous counts done later ranged from 16,000 to 30,000, all with poly counts of 90 per cent or more. There was a slight icteric tinge to the sclerae. His wound was dressed at intervals and on the fifth day an abscess was found and about an ounce of colon pus evacuated. It was hoped that this might solve the problem but it did not. Instead his temperature reached 104° every evening and dropped to 97° in the morning. This type of fever continued during his entire subsequent stay in the hospital. Blood cultures were negative. Numerous chest examinations were made because of pain on the right side but all were negative.

The patient then developed considerable discomfort from pain in the region of the gall bladder and right axilla which radiated to the right shoulder. The liver dullness increased. Slight moisture at the base of the right lung was noted. Repeated X-ray examinations for evidence of subphrenic abscess were negative, but the diaphragm was very high. The whole picture was one of marked sepsis. His hemoglobin which had not been recorded previously, was 40 per cent. Blood transfusions were given but no general improvement was noted. It was believed there was either a subphrenic or liver abscess. His complaints persisted and enlargement of the liver was apparent.

On October 5, 1934, seven weeks after admission, an incision was made in the epigastrium over the bulging mass and several areas of fluctuation were found in the liver. The wound was left open and packed with gauze. Two days later the liver was incised with a cautery and a small amount of thin greenish yellow pus was evacuated. The opening in the liver was packed with cigarette drains. Cultures and smears of the pus showed streptococci. The drainage at first was scant but later became profuse at times. This procedure did not materially change his condition. He continued to run a very septic course and on November 17, 1934, his family decided to take him home where he died about two weeks later.

This case stresses the need for early surgery in appendicitis. I believe that the complication was present before the patient came to the hospital, rather than a post-operative one. The question of whether the wound should have been drained at the time of the original operation came up, of course, very promptly in one's mind. Though I am inclined to drain cases that other operators would not, my belief that the outcome would not have been affected by drainage at the time of the appendectomy is strengthened by the fact there was no reason to believe that the wound infection was a result of peritonitis.

Appendicitis is by far the commonest cause of liver abscess in non-tropical countries.[1] It is fortunately a rare complication and one which as a rule is associated with suppurative pylephlebitis. In most cases small septic emboli become detached from a thrombus in the immediate area of an inflamed appendix[2]. These emboli usually are numerous and very septic, producing multiple abscesses throughout the liver with a resulting rapid death. Most of the abscesses occur in the right lobe because of the distribution of the portal vein. It has long been known that there are two currents of blood in the portal vein,—one from the superior mesenteric, which goes to the right lobe, and one from the inferior mesenteric and splenic, which flows to the left lobe. Occasionally solitary abscesses develop but these form a very small portion of the total number of cases.

The symptoms of a localized abscess are quite different from those of multiple abscesses. The solitary abscess develops slowly and there is nothing characteristic in its symptomatology. Multiple ab-

scesses develop suddenly with rigors, intermittent temperature, rapid prostration, and grave constitutional upsets. After a variable interval, usually some weeks, a patient who has had appendicitis develops a rise in temperature, malaise, and later, perhaps, enlargement of the liver associated with pain in this area. Jaundice is a rather constant finding, as is also a decided leucocytosis. According to Keen's *Surgery*,[3] hepatic abscess, with or following appendicitis, may come about through one of three ways: (1) Most commonly through the portal vein and associated with a pylephlebitis; (2) through the lymphatics from the surface of the liver; and (3) through continuity of destruction from parahepatic abscesses. In two cases of solitary abscess reported by Dr. L. A. Bidwell with recovery, one occurred after opening a well localized appendiceal abscess three weeks after the initial attack; the other after operation for acute perforative appendicitis. There is reason to believe that in these solitary abscess cases the infecting organism is mildly harmful as compared to the multiple abscess cases; hence a better prognosis. As to the prognosis in the multiple abscess cases, it is agreed by all writers that practically all of them die. Indeed, the most encouraging feature about these cases is their exceeding rarity. In fact, many clinics in reporting on appendicitis by the thousands of cases seem not to have had a single case.

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A REVIEW OF ECLAMPSIA AT THE UNIVERSITY OF VIRGINIA HOSPITAL.*

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The relative frequency of eclampsia in this locality prompted us to analyze the cases occurring at the University of Virginia Hospital during the past ten years. The survey covers the period from January 1, 1925, to December 31, 1934, during which time there were 3,910 deliveries in the hospital. To this number have been added fourteen cases of eclampsia which were admitted after delivery and three patients who died undelivered, giving a total of 3,927 cases. Of this number, 441, or 11.23 per cent, had some type of late toxemia of pregnancy as evidenced by hypertension, albuminuria, headache, edema, and visual disturbances with or without convulsions. Of these 441 cases of toxemia of pregnancy, 112, or 25.39 per cent, had convulsions, giving an incidence of eclampsia in 2.85 per cent of all labors.

TABLE I—INCIDENCE OF TOXEMIA AND ECLAMPSIA

Total Number of cases 3,927	*Toxemias*		*Eclampsia*		
	Number 441	Per Cent of Total 11.23	Number 112	Per Cent of Total 2.85	Per Cent of Toxemias 25.39

Williams[1] states that eclampsia occurs in less than 1 per cent of all labors, and comparison of our figures with other reports (Table II) shows the increased incidence in this locality. This increase is undoubtedly influenced by the type of patients admitted to the obstetrical service, many of the admissions being of an emergency nature for some serious complication of pregnancy. Practically all of the cases of eclampsia were emergency admissions, the patients never having been seen either in our prenatal clinic or by any physician until the

TABLE II—REPORTED INCIDENCES OF ECLAMPSIA

	Total No. of Cases	*Total No. of Eclampsia*	*Percentage*
Brunzel,[2] 1924	7,384	54	0.73
Davis and Harrar,[3] 1925	152,248	879	0.57
Greenhill,[4] 1926	29,587	83	0.28
Stander,[5] 1929	8,585	100	1.16
Binder,[6] 1934	13,354	123	0.92
University of Virginia	3,927	112	2.85

*From the Department of Obstetrics and Gynecology, University of Virginia.

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onset of severe symptoms. A large proportion of the patients come from the sparsely settled rural areas. In the entire series of 112 patients only three had ever been seen in the prenatal clinic of the hospital, and not one of these had been a regular attendant.

It has always been thought that eclampsia occurs more frequently in colder climates, but this report comes from an institution which is further south than any of those quoted above, while Stander's figures, with an incidence second to ours, are from Baltimore which is located a little further north. This suggests that inadequate prenatal care is a factor which overshadows that of geographical location.

In analyzing the incidence of the disease to deliveries by years, no distinct difference is found in the incidence for any one year. In 1925, the first year studied, the incidence to deliveries was 2.3 per cent, while for 1934, the last year studied, the incidence was 3.2 per cent, although during that time the number of deliveries per year had more than doubled. In other words, it suggests that the high percentage incidence is not alone due to the relatively small size of the service, for, although the number of deliveries in 1934 was more than double the number in 1925, the percentage incidence for eclampsia, instead of decreasing, actually showed a slight increase.

The seasonal variation is shown in Table III, and suggests an increased frequency during the spring months.

TABLE III—MONTHLY INCIDENCE

Month of Year	*Number of Cases*
January	8
February	8
March	15
April	17
May	11
June	8
July	7
August	4
September	7
October	10
November	8
December	9

The highest incidence occurred in primiparae, which confirms an old observation. The division of cases according to gravidity is shown in Table IV.

TABLE IV—GRAVIDITY INCIDENCE

Parity	*No. of Cases*	*Percentage*
Primiparas	73	65.17
Secundiparas	13	
Higher Multiparity	26	

There were three instances in which eclampsia occurred twice in the same individual, an incidence of repeat eclampsia of 2.67 per cent. There were only four cases of twin pregnancy and no instances of hydramnios were recorded.

TABLE V—AGE INCIDENCE

Age	*No. of Cases*
Below 16 years	6
16-20 years	51
21-25 years	24
26-30 years	12
Above 30 years	19

Since primiparity in itself is a predisposing factor to eclampsia it is not unusual that the greatest number of cases occurred in patients under thirty years of age. One-half of the cases occurred in patients of only twenty years of age or less.

Approximately three-fourths of the cases occurred before labor (Table VI) and all the deaths were in this antepartum group.

TABLE VI—INCIDENCE OF TYPE OF ECLAMPSIA

	Number	*Percentage*	*Deaths*
Antepartum	83	74.10	17
Intrapartum	9	8.03	0
Postpartum	20	17.85	0

MORTALITY

There were seventeen deaths, or a total rate of 15.17 per cent. During the ten-year period there were in all eighty-three maternal deaths, making a total mortality rate of 2.11 per cent, of which eclampsia was the cause of 20.48 per cent. Of the 112 cases of eclampsia, 71, or 63 per cent, were in white patients, with eight deaths, or 11 per cent, while 41, or 37 per cent, were in colored patients, with nine deaths, or 22 per cent. This ratio of colored and white patients is approximately the same as that for the entire service admissions, although the mortality percentage is approximately twice as high in the colored as in the white patients.

There were seventy-eight live-births and thirty-two still-births, while three patients died undelivered. There was no record made as to the condition of the baby in three patients who were admitted to the hospital after delivery. These figures include four instances of twins, making a total of 116 babies. The infant mortality rate is approximately 30 per cent.

TABLE VII—FETAL MORTALITY

	Number	*Percentage*		
Live-Births	78	67.2	Mothers	112
Still-Births	32	27.6	Twins	4
Undelivered	3	2.6		—
Not Recorded	3	2.6		116
Total	116	100.0		

TREATMENT

Because of a difference in the general trend of the treatment in the first seven years and the last three years of the ten-year period, the cases have been grouped into these two periods. In the first period (1925-1931) there were seventy cases of eclampsia with thirteen deaths, or 18.5 per cent. In the second period (1932-1934) there were forty-two cases of eclampsia with four deaths, or a mortality rate of 9.5 per cent. As the type of treatment seems to be more concerned with the antepartum variety and as all of the deaths occurred in this group, the antepartum cases have also been separated into these two periods. In the first period (1925-1931) there were fifty-two antepartum cases with thirteen deaths, or 25 per cent, while in the second group (1932-1934) there were thirty-one antepartum cases with four deaths, or 13 per cent mortality.

TABLE VIII—MORTALITY IN THE TWO PERIODS

	No.	*Total Deaths*	*Percentage*	*Antepartum*		
				No. Cases	*Deaths*	*Percentage*
First Period (1925-1931)	70	13	18.5	52	13	25
Second Period (1932-1934)	42	4	9.5	31	4	12.9
Total	112	17	15.17	83	17	20.48

In the first period (1925-1931), many of the cases had labor induced immediately after admission to the hospital. Of the fifty-two antepartum cases during the first period, thirty-one had labor induction at one time or another during the disease by the insertion of a Voorhees' bag, while one had labor induction by rupture of the membranes, and another medical induction by the administration of castor oil and quinine. Of the thirty-one cases which were induced by the insertion of a bag, 6, or 19 per cent, died. Of the fifty-two antepartum cases of the first period, three delivered spontaneously at home, nineteen spontaneously in the hospital, fourteen were delivered by forceps, nine by version and extraction, four by breech extraction, and three died undelivered Of the thirteen deaths in the first period, three died undelivered, three were delivered by forceps, one by breech extraction, one by version and extraction, four spontaneously at the hospital, and one spontaneously at home. In the second period (1932-1934), there were eight instances of induction, all except one of which were done after recovery from the primary attack. Five were induced by rupture of membranes, one by bag, one by bougie, and one by quinine. In the second period, of the thirty-one mothers with thirty-three children, two were delivered spontaneously at home, twelve spontaneously in the hospital, thirteen by forceps, two by version and extraction (one twins and one after bag induction), three by breech extraction, and one by cesarean section for contracted pelvis. Of the four maternal deaths in this second period, three were delivered by forceps, and one spontaneously.

TABLE IX—LABOR INDUCTION

Induction	*First Period*		*Second Period*	
	Patients	*Deaths*	*Patients*	*Deaths*
Bag	31	6	1	0
Bougie	0	0	1	0
Membranes	1	0	5	0
Medical	1	0	1	0
None	19	7	23	4
Total	52	13	31	4

During the first period varied types of treatment were used for the control of the eclamptic seizures, while during the second period the treatment was fairly definitely standardized, and approximately the same treatment was used in each case except for minor individual variations. In general, the treatment consisted of sedation with morphine hypodermically, chloral hydrate per rectum, magnesium sulphate two c.c. of 50 per cent solution intramuscularly after each convulsion, and hypertonic

glucose (25 per cent) intravenously 300-400 c.c. at six to eight-hour intervals. Venesection and digitalization were occasionally used when apparently indicated by the exigencies of the individual cases. No attempt at delivery was made until the cervix was fully dilated, unless other considerations, such as contracted pelvis, demanded operative interference. Induction of labor was only done after recovery from the convulsions and the comatose state was either complete, or was as complete as could reasonably be expected after several days of hospitalization (eight instances in the last three years).

Peckham[7] has recently, on the basis of an analysis of the Hopkins' cases, suggested changes in Eden's original classification. He suggests the following criteria, any two of which speak for a severe type: (a) Prolonged coma, (b) pulse rate above 120, (c) temperature 103° F. or more, (d) edema absent or slight, (e) blood pressure 180 or over, (f) more than twenty convulsions. Classifying our cases on the basis of Peckham's modification of Eden's criteria, it is found that forty-four cases would be severe with twelve deaths, or 27 per cent, while sixty-eight cases were mild with five deaths, or 7.3 per cent mortality. The suggested change increases the number of severe cases, but actually lowered the mortality percentage, due to the fact that it still did not remove the five fatal cases from the mild group. Peckham's omission of the quantity of albumin in the urine as a criteria seems justifiable as it was of very little or no prognostic significance in these cases. The other changes suggested by Peckham were of but little significance from a prognostic viewpoint in our analysis and seems to have but little if any superiority over Eden's original classification.

TABLE X—TYPE OF DELIVERY

Type of Delivery	*First Period*		*Second Period*	
	Patients	*Deaths*	*Patients*	*Deaths*
Spontaneous	22	5	14	1
Forceps	14	3	13	3
Breech Extraction	4	1	3	0
Version and Extraction	9	1	2	1
Undelivered	3	3	0	0
Cesarean Section	0	0	1	0
Total	52	13	33 (two twins)	5

PROGNOSIS

Some years ago Eden suggested that the mortality of eclampsia depended upon the severity of the disease and suggested the following criteria as evidence of severity: (a) Temperature above 103° F., (b) pulse rate above 120, (c) blood pressure of 200 mm. of mercury or more, (d) more than ten grams of albumin per liter, (e) absence of edema, (f) prolonged coma, (g) more than ten convulsions. Any case with two or more of the criteria present, was considered as severe.

TABLE XI—CLASSIFICATION ACCORDING TO SEVERITY

	Class	*Number*	*Percentage*	*Deaths*	
				Number	*Percentage*
Eden	Severe	40	35	12	30
	Mild	72	64	5	6.9
Peckham	Severe	44	39	12	27.2
	Mild	68	61	5	7.3

An attempt has been made to group the patients in this entire series as to the severity of the disease in accordance with the criteria established by Eden. On this basis at least forty of the 112 patients can be classified as severe, while seventy-two may be considered as mild or of doubtful severity. Of the forty in the severe group, 12, or 30 per cent died, while of those falling in the mild group only 5, or 6.9 per cent, died.

COMMENT

In reviewing these cases of eclampsia, one is impressed by the high incidence of the disease in comparison to the number of deliveries. The increased frequency can in part be explained by the type of service at the University Hospital and the social conditions of the majority of the clinic patients. It emphasizes the difficulty of health measures in the sparsely settled, mountainous, rural areas where dis-

tances, roads and means of transportation severely handicap efficient medical attention. The absence of prenatal care in practically all of the cases must be of some significance, and illustrates the desirability of some type of care for this social group. It seems true that by prenatal care many of the instances of convulsions could be prevented, for, although prenatal care has not greatly reduced the incidence of the late toxemias of pregnancy, it has permitted the detection of the toxemia, with its subsequent treatment and termination of the pregnancy, before the onset of convulsions. Attention was called some years ago at the Governor's White House conference to the difficulties and at times impossibilities of affording satisfactory obstetrical attention to the indigent rural population in the sparsely settled areas, and it seems that this study emphasizes the hazards of this lack of attention. In any state program of maternal welfare, serious consideration should be given to this group of the population.

The difference in the death rate for the two periods strongly suggests that better results are obtained with more conservative methods of treatment. It is apparently true that most of the mild cases of eclampsia will recover regardless of the method of treatment, while it is equally true that a certain proportion of the severe cases will die regardless of the treatment. This is a factor which should always be taken into consideration in attempting to evaluate methods of treatment. In dividing the cases in the two periods into severe and mild groups on the basis of Eden's criteria, it is found that, of the seventy cases in the first group, 29, or 41 per cent, of them may be considered as severe, while in the forty-two cases of the second period only 11, or 26 per cent, would be considered as severe. This difference in the incidence of severe cases may explain to some extent some of the difference in the mortality of the two periods.

SUMMARY

1. The analysis reveals 112 cases of eclampsia in the past ten years in 3,927 obstetrical cases at the University of Virginia Hospital, an incidence of 2.85 per cent.

2. Seventeen deaths occurred, or a mortality of 15 per cent, all of the deaths occurring in the antepartum variety of eclampsia.

3. The fetal mortality averaged 30 per cent.

4. Grouping the cases into two periods, the first period with rather active and the second more conservative, the mortality in the first period was 18.5 per cent, and in the second period was 9.5 per cent.

5. Classifying the cases in accordance with Eden's criteria of severity, it was found that the mortality in the severe eclamptic group was 30 per cent, while in the mild group the mortality was 7 per cent.

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IDENTIFICATION BY SINUS PRINTS.

JOSEPH MAYER, PH.D., LL.D.,
Washington, D. C.

When in 1899 the Royal College of Surgeons of Edinburgh awarded the Surgical Prize to Sir Logan Turner for his study of "The Racial Characteristics of the Frontal Sinuses," based upon an examination of 578 skulls, no one then dreamed that his work would some day be made the basis for a method of individual identification. For that matter, at the time there was no science of finger-printing either, although the making of thumb-print signatures for business purposes had already been a long-established custom in India and China.

The immediate results of Sir Logan Turner's

work on sinus characteristics were largely negative so far as determining racial differences was concerned. He concluded "that the sinuses possess no distinctive form or size which can be said to be peculiar to any of the great skull types, dolichocephalic, mesaticephalic, or brachycephalic. . . . In comparing the height-breadth indexes of the skulls with the height and breadth measurements of the sinuses, we again find that there is no relation between them. . . . The investigation also proves that the frontal air sinuses are present in all races of men, but that they occur with a varying degree of frequency."

This conclusion seemed to settle the matter of race differentiation by way of the sinuses, but what could not be appreciated then was that it also opened up an entirely new field. If "the frontal sinuses are present in all races of men," they might, if also individually distinctive, serve as a means of identification.

There are, of course, any number of ways of identifying human beings, from birth marks and scars to photographs of the face and bridge-work on the teeth. But most of these identifying marks are either not universally applicable or can be altered by human ingenuity. The face can be "lifted," and what one dentist has done another can undo, if the incentive to eradicate identifying marks is great enough, as it is with the criminal.

When Sir Edward Richard Henry, of Scotland Yard, noticed the thumb-printing practice of India and developed finger-printing as a means of criminal identification, less than thirty years ago, it was felt that the last word on the subject had been spoken. And, in fact, the finger-printing system is now in general use and has proved to be a most effective weapon in the solution of crime and in identifying law breakers. Finger-prints left at the scene of a depredation can be readily developed and comparison with the prints of known criminals can be speedily made. The simplicity of the system recommends itself for non-criminal uses also, that is, as a general means of individual identification.

Nevertheless, there are limitations to the finger-printing system. Clever criminals are finding ways of circumventing its tell-tale evidence (as in acid-treatments, skin-grafting, and use of gloves), and the disintegration of the soft-tissue parts of the body after death often destroys the loops and whorls of the victim of crime before the body is discovered. It is in the latter connection that the dentistry of the mouth has sometimes proved to be a valuable identifying aid, as in cases of drowning or of destruction by fire.

For all such purposes, whether criminal or non-criminal, for people living or long-since dead, identification by way of sinus prints is a much more comprehensive and invariable process than any previously devised. The man most responsible for developing this process and for bringing it to public attention is an internationally-known sinus specialist of London, Vienna, and Lausanne, now of Washington, D. C., Dr. Thomas A. Poole.

When Sir Logan Turner made public his pioneer work on the sinuses, not only had finger-printing as a system of identification not yet been developed, but the science of X-ray photography had only just been discovered by Roentgen in 1895. Turner had had to map out the sinus cavities of the skull by electric transillumination, probing, and laborious dissections of the bony covering. Today, the process of taking a sinus print is almost as simple as taking a finger-print. All that is necessary is for the subject to be placed in a proper position before the X-ray machine, preferably the Water's position, and in a few minutes the print can be developed. Needless to say, there are other uses for the sinus print, especially in the medical treatment of sinus involvement, but we are concerned here principally with its use for identification purposes.

In his work as a sinus specialist, Dr. Poole, a true scientist, invariably begins by having an X-ray picture made. In this way, he has critically examined thousands of sinus prints and as a hobby has developed the art of sinus identification. He has not only found that no two sinus configurations are precisely alike, but he has also observed that there are in the sinus conformations various bases for classification of types and sub-types, which may, in the end, provide a simpler method for indexing and identifying a particular individual than is provided by the loops and whorls of the finger tips. For one thing, there is much more variation in the architecture of the sinus structures than there is in finger-tip patterns. For another thing, many more kinds of measurement can be applied to a sinus print. At least four basic sinus characteristics may be noted around which innumerable special measurements can be developed: (1) the height and breadth of the cavities; (2) the presence or absence

of one or both of the frontals; (3) symmetrical or asymmetrical sinus positions; (4) the position and deviation of the septum.

So far as concerns the possibility of changing the sinus pattern with which the individual is born, there is absolutely no way of making alterations once the pattern is established, as long as the person remains alive. And, after death, there is no more durable portion of the bony structure than this very sinus configuration. It remains the same as long as the skull lasts. Had sinus prints been recorded in Tut-ankh-amen's time, we should now, some three to four thousand years later, be able therewith to identify the mummies in their tombs or the skulls exhumed from ancient Egyptian graves.

Dr. Poole is gradually interesting professional identification specialists in his work. Scotland Yard has been impressed with its possibilities, and so has the Intelligence Division of the United States Navy as well as the Department of Justice. For permanent identification records in the Army and Navy and the Marine Corps, the sinus print provides a much more infallible check than other methods. It could be similarly employed for such activities as the immigration service, for the larger risks of insurance companies, for passengers subject to the perils of the sea and air, for passport identification, for the protection of children of wealthy parents against the possibility of substitution, and for similar purposes. It should not, of course, be regarded as supplanting the use of the fingerprint, but merely as supplementing it where a broader need is indicated.

In conclusion, it hardly seems necessary to point out that in one respect the sinus print is always superior to the fingerprint, for it has prognostic as well as identifying value. It is, in fact, this added significance which has apparently been uppermost in Dr. Poole's mind in advocating its possibilities. The sinus print indicates not only normal contours but also malformations and diseased conditions, some of which have demonstrable connection with abnormal or anti-social tendencies in the individual. Some of these conditions can be corrected and thus possibly save society the expense of manhunts and imprisonments. Others are too far advanced for assistance, but the sinus print nevertheless demonstrates this and should thus ultimately serve as important evidence in court procedures. Dr. Poole, together with some of his colleagues, is at present undertaking a special study of the sinus prints of the insane, the results of which should throw additional light on this important problem. With enlarged facilities, he hopes in the near future to establish a library of sinus prints and to see his ideas of identification and prognosis applied in a number of important directions.

744 Jackson Place, Northwest.

THE ART OF EXPLAINING MEDICAL MATTERS TO OUR PATIENTS.*

GERALD A. EZEKIEL, M. D.,
Richmond, Va.

It is within comparatively recent years that it has become customary for doctors to enter into fairly complete explanations with their patients regarding conditions which they find, and to discuss with them the proposed remedies and what is to be expected from them. Since this involves translating technical matters into language which the patients can understand, it should not be undertaken in a haphazard fashion but should be given careful thought. Such explanations are not given merely to gratify curiosity on the part of the patient, or to exhibit to the patient the doctor's profound knowledge. On the contrary, we must recognize that entering into these intimate relations with our patients is undertaken in order to secure the active cooperation which can only come from mutual understanding.

The physician must first of all determine in each case to what extent it is desirable to make these explanations without reservation and in what cases a modified picture rather than a perfectly correct one may be indicated by the intelligence and temperament of the patient. Therefore, if we are correct in believing that skill in connection with our

*Read before the Richmond Academy of Medicine.

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present-day policy is important, we must develop good technique of a general character as well as ability to adapt ourselves to the special indications in each case. All this necessarily involves considerable thought. If we would accomplish our object of securing favorable results from these talks with our patients, they cannot be conducted in a perfunctory manner.

It is difficult for a physician, dealing with the average patient, to appreciate how easily what appears to him a perfectly simple explanation may be misunderstood by the patient, with the result that more harm than good may thus arise.

I will illustrate this by a case which came up recently in my own practice. The patient had pulmonary tuberculosis and I reached the conclusion that artificial pneumothorax was indicated. In medical practice this is very commonly spoken of as producing collapse of the affected lung, and in explaining the situation to the patient I used this term. Up to that time the patient had listened attentively and appeared to understand the situation and to agree to the suggested procedure. When, however, I referred to producing collapse of the lung, is was immediately evident that this produced a most unfavorable reaction. The word "collapse" itself probably terrified him, and apparently he could see no good to be accomplished in completely collapsing a lung already diseased. Whatever may have been his conception, I had for the time being lost the cooperation of this patient and it was only by going back to the start and modifying my explanation that his consent was later obtained.

We must always bear in mind that in spite of the fact the average intelligent person today is far better acquainted with medical subjects than ever before, through radio talks and popular articles in newspapers and magazines, we must not assume a more exact or extensive knowledge of these matters than the facts justify. It might be far safer to assume that our patient in each case is totally ignorant and start from the scratch. If we happen to tell him a great deal that he already knows no harm is done. On the contrary, the average person will feel flattered when he finds that his physician is giving him medical facts with which he is already acquainted and, of course, beyond a certain point a patient is never correctly and intimately acquainted with the facts in regard to his own case.

The above subject may seem an insignificant one to present to the attention of the Academy. It is important that we accomplish in each instance the results we are seeking. Hence, the development of good technique in our presentation of the case to our patients is well worthwhile. We may regard these instructive talks with our patients as a prescription, not given in a careless way, but adapted to the individual case and developed in the same careful fashion with which we expect a pharmacist to fill our written prescriptions. Unless such thought is given, we are likely not only to fail in accomplishing the desired result, but may, as in the instance above cited, actually do more harm than good.

I cannot recall any other instance in which the use of the expression "collapsing the lung" has actually deterred any of my patients from consenting to this therapeutic measure. Yet it is not improbable that in the large number of cases in which I carried out this procedure, while attending physician at Pine Camp and the tuberculosis clinic of the Richmond Health Department, as well as the cases occurring in my private practice, there must have been many who, though consenting to the procedure, nevertheless did so with misgivings which they might have been spared to a great extent and who later suffered unnecessary anxiety by reason of a disquieting conception of what a collapsed lung meant under the circumstances.

Most of this could have been avoided by substituting the term "compression," or, perhaps even better, by speaking of fixation of the lung, as the latter leads naturally to the easily understood comparison of fixation of a tubercular joint or of a broken bone, with the object of securing rest for the affected part. Is it too much to maintain that recovery in many instances might have been hastened by the more correct mental picture and the happier frame of mind thus brought about?

While the subject of this paper is one to which every doctor has, almost of necessity, given more or less subconscious thought, I have considered it sufficiently important to justify direct attention. I have sought briefly to show that there is a real art involved in explaining medical matters to our patients, and that this art is well worth cultivating as a therapeutic measure of positive value, and because of the source of satisfaction which comes to both physician and patient when this art is properly developed and applied.

1652 West Grace Street.

Proceedings of the Medical Society of Virginia

MINUTES OF THE SIXTY-SIXTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF VIRGINIA

October 15, 16, and 17, 1935

Norfolk, Virginia

GENERAL SESSION

Tuesday Evening, October 15

The opening general session of the sixty-sixth annual convention of the Medical Society of Virginia was held in the ballroom of the Monticello Hotel, Norfolk, on Tuesday, October 15, 1935, beginning at eight o'clock p. m.

Dr. William Lett Harris, of Norfolk, Chairman of the Committee on Arrangements, presided and called the meeting to order.

The invocation was said by the Reverend Taylor Willis, Rector of Christ-St. Luke's Church, Norfolk.

Dr. J. W. Hunter, President of the Norfolk County Medical Society, delivered an address of welcome.

After announcements in regard to several features of the program, Dr. Harris presented the President, Dr. Francis H. Smith, of Abingdon, who read his Presidential Address entitled "Through a Doctor's Glasses."

In the absence of any member of the Membership Committee, Dr. Carrington Williams, of Richmond, Vice-President, read the list of members of the Society who had died during the year just closed, and the members of the convention stood for a moment in silence in tribute to them.

List of 38 Members of the Society Whose Deaths Have Been Reported Since the 1934 Meeting

Dr. William Francis Drewry, Richmond, Va., October 19, 1934.

Dr. Wilson A. Koontz, Shenandoah, Va., October 13, 1934.

Dr. Clarence Ruter Dufour, Washington, D. C., September 11, 1934.

Dr. John Dunn, Richmond, Va., November 7, 1934.

Dr. Benjamin May Baker, Norfolk, Va., November 16, 1934.

Dr. Charles Everett Carter Peyton, Pulaski, Va., October 30, 1934.

Dr. John Randolph Garrett, Roanoke, Va., August 28, 1934.

Dr. James William Henson, Richmond, Va., November 28, 1934.

Dr. Henry Jeter Edmonds, Kilmarnock, Va., December 13, 1934.

Dr. Ernest Downer Davis, Sr., Stanardsville, Va., December 3, 1934.

Dr. Dexter P. Cannaday, Roanoke, Va., November 11, 1934.

Dr. John Hendron Bell, Staunton, Va., December 9, 1934.

Dr. William Tilden Smith, Norfolk, Va., December 28, 1934.

Dr. Robert Camden Whitehead, Norfolk, Va., January 27, 1935.

Dr. Charles Clifton Tucker, Blackstone, Va., January 28, 1935.

Dr. A. G. Coumbe, Philadelphia, Pa., October 24, 1933.

Dr. Frank Waring Lewis, Richmond, Va., March 2, 1935.

Dr. John Gibson Davis, Jr., Christiansburg, Va., January 28, 1935.

Dr. Edward Randolph Turnbull, Lawrenceville, Va., March 20, 1935.

Dr. Howe Alexander Jordan, Big Island, Va., March 13, 1935.

Dr. John Davis Dabney Ware, Baltimore, Md., February 23, 1935.

Dr. James Hunt Royster, Richmond, Va., March 22, 1935.

Dr. Ernest Christian Fisher, Richmond, Va., April 15, 1935.

Dr. Luther Addison Robertson, Danville, Va., May 16, 1935.

Dr. Garland E. Faulkner, South Boston, Va., May 30, 1935.

Dr. James T. Leftwich, Highland Springs, Va., June 6, 1935.

Dr. Henry Dewey Ribble, Blacksburg, Va., March 1, 1935.

Dr. Calvin Graham Dold, Buena Vista, Va., June 22, 1935.

Dr. George E. Wiley, Bristol, Va., March 25, 1935.

Dr. Daniel Malloy Prince, Mt. Vernon, Wash., April 10, 1935.

Dr. William Wallace Bennett, Blackstone, Va., August 3, 1935.

Dr. David James King, Williamsburg, Va., August 18, 1935.

Dr. Justus Lee Cooke, Fredericksburg, Va., August 6, 1935.

Dr. Albert C. Stephens, Barren Springs, Va., May 15, 1935.

Dr. Joseph Stuart Hume, Norfolk, Va., July 29, 1935.

Dr. William F. Henderson, Blacksburg, Va., September 23, 1935.

Dr. Chester B. Nuckolls, Hillsville, Va., June 28, 1935.

Dr. John L. Thornton, Warrenton, Va., October 7, 1935.

PRESIDENT SMITH: It is the privilege and the pleasure of the President of your Society, gentlemen, to invite two guests, and only two guests, from outside the State to address this gathering. I have chosen to invite as

one of those guests this year the gentleman who will now speak to us, Dr. Arthur C. Christie, of Washington, D. C. I am sure that you would like to hear something about him. He served in the late war, attaining the rank of Colonel in the Medical Corps, and he is now a Colonel in the Medical Reserve Corps. He is clinical professor of roentgenology in the Medical College of George Washington University. He is a fellow of the American College of Physicians and of the American College of Radiologists, and a past president of the American Roentgen Ray Society and of the American Radiological Association. He was a member of the Committee on the Cost of Medical Care, signing the minority report, and is the author of several books. He is now President of the International Congress of Radiology, which will, in 1937, meet in this country for the first time in its history. This distinguished and able gentleman will now address us on "The Answer of the Medical Profession to State Medicine."

Dr. Arthur C. Christie, Washington, D. C. (*invited guest*), presented his address on "The Answer of the Medical Profession to State Medicine."

The program having been completed, the evening session then adjourned.

SCIENTIFIC SESSIONS

Wednesday, October 16, 1935

Medical Section

The Medical Section of the Medical Society of Virginia met in the dining-room of the Monticello Hotel, Norfolk, and was called to order by Dr. Francis H. Smith, President, at nine-fifteen a. m.

Dr. Paul D. Camp, Richmond, read his paper entitled "Essential Hypertension and Bright's Disease: Their Differential Diagnosis and Treatment," which was discussed by Drs. F. C. Rinker, Norfolk; T. Dewey Davis, Richmond; and J. W. Hunter, Norfolk, and by Dr. Camp in closing.

Dr. Blanton P. Seward, Roanoke, read his paper, "Remarks on the Diagnosis of Coronary Thrombosis," which was discussed by Drs. J. Edwin Wood, Jr., University; Paul D. Camp, Richmond; and Richard Mason, The Plains.

Dr. William P. Caton, of Alexandria, read his paper on "Rocky Mountain Spotted Fever As Found in the East," and this was discussed by Drs. H. A. Latane, Alexandria; J. C. Flippin, University; H. S. Daniel, Louisa; S. A. Anderson, Jr., Richmond; by Dr. Flippin again; by Drs. J. E. Knight, Warrenton; Fletcher Wright, Petersburg; Percy Harris, Scottsville; and Fred Gochnauer, Upperville; and in closing by Dr. Caton.

Dr. C. C. Cooley, of Norfolk, read his paper entitled "Cicatricial Stenosis of the Esophagus: Report of Cases," which was discussed by Drs. A. A. Burke and Benjamin A. Doggett, of Norfolk, and by Dr. Cooley in closing.

Dr. James V. Bickford, of Norfolk, read his paper on "Enuresis in Children," which was discussed by Dr. William P. McDowell, Norfolk, and W. B. McIlwaine, Petersburg, and in closing by Dr. Bickford.

Dr. William H. Higgins, of Richmond, read his paper entitled "The Heart in Myxedema: Clinical and Postmortem Findings."

The program having been completed, the Medical Section then adjourned at twelve-fifteen p. m.

Surgical Section

The Surgical Section of the Medical Society of Virginia, held in the Monticello Hotel, Norfolk, convened at nine-thirty o'clock, Dr. Carrington Williams, vice-president, presiding.

The first paper was by Drs. C. J. Andrews and Richard B. Nichols, Norfolk, their subject being "Unusual Indications for Caesarean Section." This was illustrated with lantern slides and was discussed by Dr. M. P. Rucker, Richmond, and by Drs. Andrews and Nichols in closing.

Dr. Harry J. Warthen, Richmond, read his paper on "Acute Intestinal Obstruction," which was discussed by Dr. C. B. Morton, University; Dr. I. A. Bigger, Richmond, and by Dr. Warthen, in closing.

"Fractures of the Hip" by Dr. M. H. Todd, Norfolk, was the next paper presented.

Dr. Donald M. Faulkner, Richmond, read his paper on "Non-Union of Fractures of the Humerus." These two papers were discussed by Dr. Foy Vann, Norfolk; Dr. H. Page Mauck, Richmond; Dr. M. H. Todd, Norfolk; Dr. C. H. Peterson, Roanoke; and in closing by Drs. Todd and Faulkner.

The next paper was by Dr. J. Shelton Horsley, Richmond, on "Diagnosis and Treatment of Cancer of the Large Bowel." This was discussed by Dr. I. A. Bigger, Richmond; Dr. H. D. Howe, Hampton; Dr. R. L. Payne, Norfolk, and by Dr. Horsley, in closing.

"Vascular Surgery Necessitated by Trauma" was then presented by Dr. Julian L. Rawls, Norfolk, the discussion being opened by Dr. I. A. Bigger, Richmond, and closed by Dr. Rawls.

The paper on "Present-Day Treatment of Certain Malignant Diseases" by Drs. Vincent W. Archer and W. L. Kilby, University, was read by Dr. Archer, and discussed by Dr. Fred Hodges, Richmond; Dr. J. Shelton Horsley, Richmond; and in closing by Dr. Archer.

The Surgical Section adjourned at 1:00 o'clock.

Wednesday Afternoon Session

General Session

The Medical Society of Virginia met in the ballroom of the Monticello Hotel at three p. m., for its first general scientific session, with Dr. Alexander F. Robertson, Jr., of Staunton, Vice-President, presiding.

The paper of Drs. Wright Clarkson and Allen Barker, of Petersburg, on "Cancer Control" (illustrated), was read by Dr. Clarkson and was discussed by Dr. J. Shelton Horsley, of Richmond.

Dr. Raymond Kimbrough, of Norfolk, read his paper entitled "Dermatoses and Cold Weather," which was discussed by Dr. D. C. Smith, University.

The following four papers were read as a Symposium on Therapy:

"Treatment of Acute Respiratory Diseases," by Dr. F. C. Rinker, Norfolk.

"Treatment of Acute Infections of the Upper Urinary Tract," by Dr. Joseph F. Geisinger, Richmond.

"The Treatment of the Toxemias of Pregnancy," by Dr. T. J. Williams, University.

"A More Rational Treatment for the Mental Patient," by Dr. H. C. Henry, Petersburg.

The papers comprising the Symposium were discussed by Drs. J. C. King, Radford; A. I. Dodson, Richmond; C. J. Andrews, Norfolk; F. O. Plunkett, Lynchburg; James K. Hall, Richmond; and Claiborne T. Jones, Petersburg; and in closing by Dr. Geisinger and Dr. Williams.

Dr. James K. Hall moved that Dr. Henry's paper, "A More Rational Treatment for the Mental Patient," be released to the press of the State, with a request for publication, and this motion was seconded and carried.

The program having been completed, the Society adjourned at five-thirty o'clock p. m.

Wednesday Evening Session

The Society met in the ballroom of the Monticello Hotel and was called to order at eight-ten o'clock p. m. by the President, Dr. Francis H. Smith.

President Smith read the following telegram:

"Jacksonville, Fla., Oct. 16, 1935.

Dr. F. H. Smith, President,
Medical Society of Virginia,
in Annual Meeting Assembled,
Norfolk, Virginia.

Greetings and good wishes. I hope you are having a most successful annual meeting. We want to have a large number of your good Virginia doctors with us at our St. Louis meeting next month. Fraternally yours.

H. Marshall Taylor, President,
Southern Medical Association."

The paper of Drs. E. C. Drash, University, and J. B. Nicholls, Catawba Sanatorium, entitled "The Problem of Pleural Adhesions in Pulmonary Tuberculosis" (illustrated), was read by Dr. Drash and was discussed by Drs. I. A. Bigger, Richmond; C. W. Scott, Newport News; and Dean B. Cole, Richmond.

President Smith introduced the next speaker, Dr. James E. Paullin, as follows:

PRESIDENT SMITH: As I remarked to you last night, it is the pleasure and privilege of your Society to invite two and only two guests to this meeting. I introduced to you last night Dr. Arthur C. Christie. Tonight it is my pleasure to introduce another distinguished guest, Dr. James E. Paullin, Professor of Clinical Medicine at Emory University, Atlanta, and Chief of Medicine of Grady Hospital, Atlanta. He was a Major in the Medical Corps of the United States Army during the late unpleasantness, and he is now President of the Medical Association of Georgia. For my own gratification, I am glad to tell you he is a Democrat and a Presbyterian. I shall not tell you where I got that information, but I am glad to introduce Dr. Paullin. His subject is "The Significance and Diagnostic Importance of Pain in Disease."

Dr. James E. Paullin, Atlanta, Ga. (*invited guest*), read his paper entitled "The Significance and Diagnostic Importance of Pain in Disease."

Dr. C. L. Harrell, Norfolk, read his paper entitled "Suppurative Condition of the Lung Treated by Artificial Pneumothorax," which was illustrated by lantern slides. The paper was discussed by Dr. C. W. Scott, of Newport News, and by Dr. Harrell, in closing.

Dr. R. Finley Gayle, Jr., of Richmond, read his paper on "Fever Therapy in Neurosyphilis," which was discussed by Dr. J. A. Shield, of Richmond, and by Dr. Gayle in closing.

Dr. P. E. Thornhill, of Norfolk, read his paper entitled "External Version in the Eighth Month for Breech Presentations," which was discussed by Drs. Waverly R. Payne, of Newport News, and G. B. Byrd, of Norfolk, and in closing by the author.

The program having been completed, the evening session then adjourned.

Thursday Morning Session

The Medical Society of Virginia met for its last session in the ballroom of the Monticello Hotel on Thursday morning, October 17, 1935, and was called to order by the President, Dr. Francis H. Smith, at nine-fifteen a. m.

Dr. Oscar Swineford, Jr., of University, read his paper entitled "Observations on History Taking in Allergy," which was discussed by Dr. Emily Gardner, of Richmond.

Dr. W. Ambrose McGee, Richmond, read his paper on "The Management of The Allergic Individual," which was discussed by Dr. Oscar Swineford, Jr., of University, and by Dr. McGee in closing.

Dr. F. M. Hodges, Richmond, read his paper entitled "The Results of Roentgen Treatment of Some Very Advanced Malignancies," which was discussed by Dr. Vincent Archer, of University, and by Dr. Hodges in closing.

Dr. W. W. Waddell, Jr., of University, read his paper entitled "An Outbreak of Anterior Poliomyelitis in Charlottesville and Albemarle County, Virginia"; and the paper of Drs. Howard R. Masters and Lee E. Sutton, of Richmond, entitled "Poliomyelitis: Diagnosis of the Varieties," was read by Dr. Sutton. These two papers were discussed by Drs. Wyndham B. Blanton, Richmond; Andrew Hart, University; Alexander Gilliam, of the United States Public Health Service; Alexander F. Robertson, Jr., Staunton; I. C. Riggin, Richmond; B. H. Kyle, Lynchburg; by Dr. Waddell; by Dr. Gilliam again; and in closing by Dr. Waddell and Dr. Masters.

The paper of Drs. E. E. Barksdale and D. C. Smith, of Charlottesville, on "The Diagnosis of Early Syphilis," was read by Dr. Smith and was discussed by Dr. Lawernce T. Price, of Richmond.

At the conclusion of the scientific program, the President called for the report of the House of Delegates, which was read by the Secretary, Miss Agnes V. Edwards.

PRESIDENT SMITH: The by-laws provide that this report be made to this Society but that no action shall be taken upon it. In other words, it is final.

Now for me comes the most interesting part of the proceedings, when I shall lay my burden down. Dr. Moncure, will you stand, please. I do not believe, if we had searched the whole Society over, we could have found a prettier example than this of before and after taking

the presidential cure. I am reminded of an inscription upon a tombstone, Dr. Moncure:

"As I am now, so you will be;
Remember this, and think of me."

Of course, I am merely joking.

Dr. Moncure, you will find, after your year in the presidency, that Virginia doctors can be led but they cannot ever be driven. If you will adopt as the text and motto of your administration, "I am among you as one that serveth," you will find Virginia doctors always loyal, always cooperative, even though you cannot always get them to agree with you.

I feel perfectly confident in surrendering the presidency to Dr. Philip St. L. Moncure, of Norfolk. I congratulate you, sir.

DR. PHILIP ST. L. MONCURE: As has been said by every president that I have ever seen inducted into office (they always say this), "It is the extreme moment of my life, the acme of my medical career." That is a very good get-off.

In taking over this gavel, the symbol of authority, I hope and promise that I shall always use it discreetly and with judgment. If I should fail to do so, I know you well enough that you will set me right, and I insist that you do it. This Society is not mine; it is ours. It is an instrument of great power and force, used rightly; and I hope that we shall not abuse it but that we shall continue to make it a very powerful institution in our midst for both the medical fraternity and for humanity generally. As President, I am in your hands; I am simply your agent to do your will.

I now, without further ado, assume the office of President and ask for any business that may be before you. Is there anything further to come up? If not, I will name the Standing Committees, as follows:

(The numbers after names indicate the length of term of office as one member of each Standing Committee, except the Department of Clinical and Medical Education, is named by the incoming President for a term of three years).

COMMITTEES

PUBLICATION AND PROGRAM: Dr. Wyndham B. Blanton (2), *Chairman;* Dr. H. A. Tabb (1); Dr. H. B. Mulholland (3).

SCIENTIFIC EXHIBITS AND CLINICS: Dr. C. Bruce Morton (1), *Chairman;* Dr. J. D. Willis (2); Dr. W. Ambrose McGee (3).

DEPARTMENT OF CLINICAL AND MEDICAL EDUCATION: Dr. F. H. Smith, *Chairman;* Dr. I. C. Riggin; Dr. J. C. Flippin; Dr. Lee E. Sutton; Dr. G. F. Simpson; Dr. H. C. Henry.

LEGISLATION: Dr. Frank S. Johns (1), *Chairman;* Dr. H. T. Smith (2); Dr. Robert J. Payne (3).

MEDICAL ECONOMICS: Dr. W. B. Martin (3), *Chairman;* Dr. A. F. Robertson (2); Dr. C. O. Dearmont (1).

MEMBERSHIP: Dr. J. A. White (2), *Chairman;* Dr. A. W. Hammond (1); Dr. Isaac Peirce (3).

ETHICS: Dr. J. C. Flippin (1), *Chairman;* Dr. W. R. Williams (2); Dr. P. W. Miles (3).

I have not determined upon the personnel of the special committees. There have been many requests that special committees be named, but I do not believe in a multiplicity of committees. We have enough to do the work. We want, however, to extend the influence of the Society as much as possible, and if creating committees will help us to that end, all right. Often people like to see their names in print. There are some committees other than the standing committees, which are very important. The personnel of those will be published in the December JOURNAL.

Is there any other business? Any resolutions to be offered, or any new business to be taken up at this time?

If not, a motion to adjourn is in order.

On motion, the Society adjourned, at twelve-twenty-five o'clock p. m., *sine die.*

The following are OTHER COMMITTEES named by Dr. Moncure following the close of the annual meeting:

ADVISORY BOARD TO WOMAN'S AUXILIARY: Dr. J. Allison Hodges, *Chairman;* Dr. Southgate Leigh; Dr. Fletcher J. Wright.

TO ADMINISTER TRUST FUND FOR POSTGRADUATE CLINICAL EDUCATION: Dr. Frank H. Smith, *Chairman;* Dr. R. D. Bates; Dr. J. C. Flippin; Dr. I. C. Harrison; Dr. J. A. Hodges.

CHILD WELFARE: Dr. W. P. Jackson, *Chairman;* Dr. L. T. Royster; Dr. F. D. Wilson; Dr. C. E. Conrad; Dr. R. D. Bates; Dr. J. B. Stone; Dr. P. W. Miles.

WALTER REED COMMISSION: Dr. Clarence Porter Jones, *Chairman;* Dr. O. T. Amory; Dr. James D. Clements.

TO ARRANGE PROGRAM FOR HEALTH DIVISION OF THE VIRGINIA CONFERENCE OF SOCIAL WORK: Dr. Hugh H. Trout, *Chairman;* Dr. Carrington Williams; Dr. Wyndham Blanton; Dr. Greer Baughman; Dr. Wm. H. Higgins; Dr. Harrison Picot; Dr. Samuel Anderson; Dr. Basil Jones; Dr. Fred P. Fletcher, Jr.; Dr. Franklin D. Wilson; Dr. C. Lydon Harrell; Dr. W. P. Jackson; Dr. A. M. Showalter.

MATERNAL WELFARE: Dr. T. J. Williams, *Chairman;* Dr. C. J. Andrews; Dr. Greer Baughman; Dr. J. O. Boyd; Dr. F. O. Plunkett.

BUSINESS SESSIONS

Council

The Council of the Medical Society of Virginia met in the Monticello Hotel, Norfolk, Va., Tuesday, October 15th, at 10:00 A. M.

Present: The President, Dr. F. H. Smith, Abingdon, who presided; the President-Elect, Dr. P. St. L. Moncure, Norfolk; the following Councilors, Drs. Griffin W. Holland, Eastville; Julian L. Rawls, Norfolk; Roshier W. Miller, Richmond; Wright Clarkson, Petersburg; C. O. Dearmont, White Post; J. E. Knight, Warrenton; and C. B. Bowyer, Stonega; and the Secretary, Miss Agnes Edwards, Richmond.

It was stated that the doctors of Culpeper County had organized and wished a charter from the State Society. Dr. Knight, councilor for this county, said that

he was very glad that they had organized, and moved that the charter be granted. Seconded and carried.

The budget as prepared by Drs. Clarkson and Roshier Miller was explained by Dr. Clarkson and after discussion was approved. One important change in the budget was an allowance of $100 instead of the $25.00 allotted the President for the past several years, and an appropriation of $50.00 to the President-Elect, that these officers may be in a position to visit more of the component societies with a view of interesting them in the work of our organization. The Committee had increased the appropriation for the VIRGINIA MEDICAL MONTHLY by $250.00 and upon their suggestion, it was moved and carried that an additional $250.00 be allowed later in the year, provided receipts from the journal justify this expense.

Dr. Clarkson said that from time to time the Society might have funds available for investment and he thought it would be well for the Council to give the Budget Committee authority to invest such moneys without awaiting a meeting of the Council. It was moved that the Commitee be empowered to invest such funds as necessary.

In specifying the appropriation for the work of the Walter Reed Commission, an inquiry brought out the fact that no one knows who is holding the deed to this property. The Secretary was, therefore, instructed to secure this deed to be placed in the Society's lock box in the bank.

The minutes of the mid-winter meeting of the Council as printed in the October issue of the MONTHLY (pages 393-4) were approved.

Reports from the Councilors not calling for any special action, the meeting adjourned.

AGNES V. EDWARDS, *Secretary.*

House of Delegates

The first meeting of the House of Delegates was held in the Monticello Hotel, Norfolk, Va., Tuesday, October 15th, at 11:15 A. M., with the President, Dr. F. H. Smith, Abingdon, presiding.

Roll call showed a quorum present.

The minutes of the last annual meeting as published in the November, 1934, issue of the MONTHLY were approved, as also the report of the mid-winter meeting of the Council.

The reports, published in the October, 1935, issue of the MONTHLY, were next in order for consideration.

Delegates to the American Medical Association (pages 394-5). This report was ordered received and filed.

The report of the *Executive Secretary-Treasurer* (page 395) was accepted, with the following supplement:

At the time of our meeting in 1934, we had a membership of 1,830. Since then, we have enrolled 68 new members and lost 17 by resignation, 13 for non-payment of dues, and 38 by death, making our total enrollment at this time still 1,830.

The *Auditor's Report* of our financial condition immediately follows the minutes.

Publication and Program (page 395). Accepted.

Scientific Exhibits and Clinics (pages 395-6). Accepted.

Department of Clinical and Medical Education (pages 396-9). Received and filed.

Legislation (page 399). Accepted.

Medical Economics (pages 399-402). It was moved and carried that this report be received and filed for later action, that the Chairman might be present to explain certain points brought out in the report.

Membership (page 402). Adopted.

Ethics (page 402). In the discussion following this report, the question was asked if a member who had been expelled by his local society should be automatically expelled by the State Society, and it was the opinion of the Chairman that such was the case. In view of this opinion, it was moved and carried that such a member be expelled from the State Society.

Walter Reed Commission (pages 402-3). Accepted.

Group Societies (page 403). Received and filed.

Advisory Board to Woman's Auxiliary (page 403). Accepted.

To Administer Trust Fund for Postgraduate Clinical Education (page 403). Accepted.

Child Welfare (pages 403-4). Dr. W. E. Brown, superintendent of Blue Ridge Sanatorium, explained the part of the report with regard to the high death rate from tuberculosis in Virginia by stating that in 1928 the State Board of Health adopted resolutions giving preference to cases who come from homes where small children are exposed, thereby jeopardizing the health of the coming generation. This has caused a slowing up in the turn-over of patients because as these cases are usually advanced, they cannot be cured quickly.

In the absence of the Chairman, Dr. F. D. Wilson, a member of the Committee, presented the following supplementary report, which had been presented to Governor Peery by the State Child Conservation Committee through its Executive Committee:

A STUDY OF CERTAIN EXISTING CONDITIONS IN THE STATE OF VIRGINIA WITH SPECIFIC RECOMMENDATIONS

The State Child Conservation Committee, through its Executive Committee, composed of the Chairmen of the Child Hygiene and Child Welfare Committees from the following State-wide organizations, the Virginia Tu-

berculosis Association, the Medical Society of Virginia, the Virginia Pediatric Society, the Virginia Education Association, the Cooperative Education Association, Virginia Branch of the National Congress of Parents and Teachers, and the State Superintendents Association, respectfully presents to the Honorable George C. Peery, Governor of Virginia, for his consideration, certain serious conditions in the State which affect the safety of all citizens, the welfare of many thousands, and which will bring, inevitably, greatly increased and unnecessary tax burdens if permitted to continue, hindering the best development of the State.

These "certain serious conditions," shown in the facts and figures presented below, have been determined by careful studies of data from the most reliable sources, and the recommendations adopted unanimously by the entire Committee, were prepared after serious consideration by those especially fitted to make these studies and recommendations. Furthermore, this Committee has no particular interests or affiliations, represents a very large body of taxpayers, and is only concerned as these conditions affect the safety and welfare of Virginia people and particularly Virginia children.

This Committee believes that the following fundamental and basic health problems must be considered and dealt with, not only for the protection of the people as a whole, but, also, in order that our educational, welfare, mental hygiene, and health projects may continue to develop as they should:

1. Virginia has the third highest death rate from tuberculosis in the Southern States, and, excluding the District of Columbia and the so-called "death resort" states, the fourth highest in the United States. Virginia is not keeping up the average rate of decline in this death rate; virtually all the states, including the Southern States, are cutting down the tuberculosis death rate much faster than Virginia.

2. Approximately 2,000 people die annually in Virginia from tuberculosis, a preventable and curable disease. Virginia's case rate is not declining. Though many of the new cases reported may be due to better case finding, yet, in 1933, there were 1,690 more cases in the State than in 1932—certainly an indication of the growing seriousness of this problem.

3. In 1933 there were nearly 1,000 more deaths from tuberculosis than we had available beds, both State and private. Virginia has only about sixty beds for tubercular white children, and no beds for colored children with active or open cases.

4. In 1931-33 the greatest reduction in State Health Budgets was in tuberculosis prevention.

5. Owing to the scarcity of available and free beds, the slow intake of patients at the Sanatoria, the slow "turn-over" of patients in the Sanatoria, active tuberculosis cases in large numbers, untrained and without proper medical care, continue to spread infection for the perpetuation of our problem.

6. According to estimates secured from the State Health Department there are approximately 50,000 new venereal disease infections annually in Virginia.

7. The State has no funds appropriated for a State program of control of this disease, though a large proportion of State-supported defectives are the direct result of this disease.

8. The Virginia Commission for the Blind estimates that 75,000 children in the State have eye defects needing the care of competent specialists, which, if untreated, will result in many instances in total blindness, and in serious handicaps educationally and vocationally.

9. Conservative studies indicate that there are 10,000 children in our schools in serious need of tonsil-adenoid operations, who cannot pay for these operations. Among these, and also those having vision defects, are a large percentage, therefore, unable to advance in school.

10. We spend millions for all forms of education, yet nothing to see that our practicing physicians in the State are able to keep abreast of modern scientific developments.

Because of the financial difficulties of the present time, the State Child Conservation Committee does not ask that sufficient funds be appropriated by the State for the complete elimination of the above-mentioned problems immediately. The complete and idealistic solution of these problems would require an immediate investment of several millions each year. Though we know of no better investment in practical idealism even for the expenditure of such a sum, yet we realize the wisdom of our State-governing authorities in living within the State income. We do question, however, the wisdom of the large expenditures in many fields, needless to enumerate, if these expenditures are made at the expense of the safety of all citizens, and the possible rehabilitation of many thousands, who, otherwise, have to be State-supported in our asylums, our tuberculosis sanatoria, our schools for the blind, and on our relief rolls.

That Virginia may no longer remain in the opprobrious position she now holds in tuberculosis control, venereal disease control, and the health of her people generally, the State Child Conservation Committee respectfully begs the Governor of Virginia to include in his Recommendation and Budget, to be presented to the next General Assembly, for minimum programs to hold these problems safely within bounds, the following carefully considered sums of money, for the specific purposes and agencies indicated, as follows:

Tuberculosis Control, State Health Department	$100,000
Venereal Disease Control, State Health Department	30,000
Sight-Saving, Virginia Commission for Blind	10,000
Tonsils-Adenoids, State Health Department	35,000
Immunizations, State Health Department	10,000
	$185,000

And in the event that Federal Funds do not make a postgraduate service to practicing physicians available—

Postgraduate service, Medical Colleges	12,000
	$197,000

Dr. C. H. Peterson then presented the following resolutions:

WHEREAS: The Medical Society of Virginia realizes the serious problems confronting Virginia in tuberculosis control, venereal disease control, and the correction of remediable retarding defects in school children, and, whereas:

The State Child Conservation Committee has made important and constructive recommendations regarding the needed appropriations for the more adequate control of these problems; therefore,

BE IT RESOLVED: That the Medical Society of Virginia requests the Governor of Virginia and the members of the State Legislature to make the suggested appropriations at the next General Assembly.

BE IT RESOLVED, also, that copies of these resolutions be sent the Governor of Virginia, and the members of the Legislature.

It was moved, seconded and carried that the original report, as published in the MONTHLY, be received and filed.

To answer questions about how the work is to be conducted, for which the appropriations are asked, Dr. I. C. Riggin, State Health Commissioner, was given the privilege of the floor. He stated that there was some question in his mind as to how the *tonsil and adenoid* appropriation should be expended but he felt that this would not infringe upon the rights of physicians but would expand the work of the public health department. Personally, he felt that it should be paid for hospital service and not for physicians' fees. The plan would have to be worked out with the local medical societies and hospital groups. The fund for *tuberculosis* control would be used to extend facilities at the State institutions. He stated that there was no fund for *venereal disease* control in the State at this time and he believed this would materially help the physicians by being used to supply free arsenicals to them. The State Health Department would, of course, have nothing to do with the *sight-saving* as this would be handled by the Virginia Commission for the Blind. The amount allotted for *immunization* would be used to supply material to physicians for indigent children.

Dr. R. D. Bates moved that the resolutions accompanying the supplementary report be adopted. This was seconded.

A discussion brought out the fact that some of the members felt this work could be done better locally, possibly through the County Board of Supervisors.

Dr. F. D. Wilson said that the ideal situation would be to have this work handled by the local agencies but they have not done it heretofore. He felt that the Society should place itself on record as favoring the suggested appropriations, because if they did not the work would probably be undertaken by lay organizations.

Dr. J. C. Flippin said this question was brought to the attention of the Department of Clinical and Medical Education at a meeting in June and at that time it was thought wise not to take any step until it was known what would be done by the National Government as Congress was then in session, and it seemed likely at that time that a Federal appropriation for health work might be available, depending upon State support. Naturally it was felt it would not be wise for the medical profession to put any proposition before the Budget Committee of Virginia that was not absolutely sound. While he did not feel that chances for this appropriation were good he thought that the Society did not want to be put in the position of not cooperating when the subject was presented. It is certainly a work for the State Department of Health rather than the State Department of Education as it is better for medical affairs to be entrusted to a medical organization than a lay organization.

The resolutions, being put to vote, were adopted.

In connection with this report, Dr. R. D. Bates, Chairman of the Department of Clinical and Medical Education, presented the following suggestions, supplementary to the report from that Department (pages 396-9):

As retiring Chairman of this Department, a suggestion to the House of Delegates as to the future activities of this Department may be added to the report of work accomplished. If this very important function of the Medical Society of Virginia is to continue, it is absolutely essential that some regular source of income for the carrying on of this work be provided. It may be stated here that since our report to this body was written, a meeting of the Department has been held, at which it was decided to accept the offer of the Child Conservation Committee, to include in their application to the Governor funds with which to carry on Postgraduate instruction. This was done after it was found that there was no probable chance of securing funds from the Federal Government for this purpose.

It is suggested to the House of Delegates that they might ask the Legislature to make an annual appropriation for this purpose of sufficient size, along with the appropriation to the two Medical Schools, to carry on this work and that this sum be divided equally between the two schools, to be administered by them under the supervision of the Department of Clinical and Medical Education. This would be a strictly educational appropriation and is equally as important, if not more so, as the education of the under-graduate—certainly from the standpoint of its importance to the Public Welfare. Some such plan should be endorsed by the powers that be, because of its importance to the child welfare work as well as to the general public welfare. This suggestion is presented to you as the result of some thought given to this subject and by a realization of the importance of postgraduate instruction to the public as well as to the doctor.

It was moved and carried that this be received and filed.

At this time, Dr. Southgate Leigh, who was not present when his report as Chairman of the Committee on Group Societies was called, presented the following supplementary report which was ordered received and filed:

XUM

With your kind permission, I would like to say a few words in addition to the report of our committee.

We have been much impressed with the interest shown in our efforts by the younger members of the profession. I believe they feel strongly that we are passing through critical times and must take heroic action. The remarks made by our President at a Richmond meeting were, however, most discouraging, to the effect that he found a great deal of apathy among the members of the society in regard to taking protective action. To my mind our only safeguard will come through close and individual cooperation.

The American Medical Association has taken the most positive steps against State medicine but great pressure is being brought on the profession to institute plans for various forms of medical insurance which will lead promptly to the government practice of medicine.

I would sound a solemn note of warning that unless the profession becomes promptly aroused our splendid organization will become disorganized and eventually destroyed.

By prompt action there is much that can be done. Your delegates have a solemn duty to perform. You must become thoroughly aroused and at this meeting take steps to inform and organize every doctor in Virginia. With such an organization this State at least will be safe.

The next order of business being the naming of the *Nominating Committee*, a recess was taken that the delegates from the various districts might make their selections. This resulted as follows:

1st District—Dr. R. D. Bates.
2nd District—Dr. W. B. Martin.
3rd District—Dr. F. D. Fletcher.
4th District—Dr. R. A. Moore.
5th District—Dr. I. C. Harrison.
6th District—Dr. F. A. Farmer.
7th District—Dr. Frank Tappan.
8th District—Dr. Percy Harris.
9th District—Dr. George A. Wright.

The President then asked the Committee to be prepared to present nominations for the officers of the Society at the afternoon session, following which the meeting adjourned.

Afternoon Session

The second meeting of the House of Delegates was held at 2:30 P. M., on Tuesday, October 15th, with the President presiding.

A quorum being present, the first order of business was the presentation of the *budget* which had been approved by the Council. This was read by Dr. R. W. Miller and was adopted.

The next subject for consideration was the report of the *Medical Economics Committee* (pages 399-402) which had been deferred until this time. It was moved and seconded that this be adopted. Questions being asked about the Washington Plan referred to in the report, it was stated that this resolution does not bind the Medical Society of Virginia to set up such a project but the plan was offered as a model.

Dr. Carrington Williams moved that the words "approve the principles of" be substituted for the word "adopt," making section 1 of the second resolution read: "1. That the Medical Society of Virginia approve the principles of the Washington, D. C., plan," etc.

Dr. Moncure moved that the word "compulsory" be inserted in the third line of the first resolution before the word "group," making that part read: "*Therefore, be it resolved*, that the Medical Society of Virginia reaffirm its stand taken in 1933 of opposing any general scheme of compulsory group payment for medical care," etc.

The report was then adopted as amended.

Under new business, the following resolution from the Hanover Medical Society was presented:

WHEREAS the incidence of syphilis is certainly not on the wane,

And WHEREAS this very obvious condition is an indictment of the medical profession, both because of inadequate publicity and because of imperfect methods of dealing with the problem,

THEREFORE BE IT RESOLVED by the Hanover Medical Society that the Legislative Committee of the Virginia Medical Society be requested to present to the next meeting of the State Legislature a bill that will embody the following items:

(1) All chemicals in the treatment of all cases of syphilis be furnished free by the State.

(2) The State pay the physician not less than ten dollars for treating each indigent syphilitic.

(3) Every syphilitic shall be treated and controlled by his own physician or the one of his choice, health officers and social nurses cooperating.

(4) To care for flagrant violators of proscribed regimen and defiant syphilitics by proper State Ordinances.

(5) That it shall be the legal duty and legal privilege of attending physician to locate all contacts of syphilitics treated.

BE IT RESOLVED FURTHER that these resolutions be spread upon the Minutes of the meeting at which they may be adopted; that a copy be sent to the Legislative Committee of the Virginia Medical Society and at the appropriate time the members of the House and the Senators be requested to support what bill the Legislative Committee may offer that may be reasonable.

A. C. RAY,
A. C. RAY, JR.

This was ordered referred to the Legislative Committee.

Resolutions from the Mid-Tidewater Medical Society were read as follows:

WHEREAS, It has been brought to the attention of the Mid-Tidewater Medical Society, composed of the counties of Essex, Middlesex, Gloucester, Mathews, York, New Kent, King William and King and Queen, that the clinics at the Medical College of Virginia and at the

University of Virginia are treating many cases that are not indigent:

BE IT RESOLVED, That the Mid-Tidewater Medical Society asks the cooperation of these two clinics in checking this unfair and uncalled for competition, and that a requirement for treatment shall be a written request from the family doctor, before receiving treatment:

FURTHER, BE IT RESOLVED, That a copy of this resolution be sent to the head of each clinic and a copy be reported to the Medical Society of Virginia publication.

It was moved and carried that these be received and filed.

The Hampton Roads Chemists' Club of Norfolk had sent the following for the attention of the Society:

WHEREAS, The Hampton Roads Chemists' Club has long realized the importance of correcting the pollution evils which exist throughout the State, and especially in Hampton Roads and adjacent waters, because,

First, Of the economic loss to the Virginia seafood industry,

Secondly, The real menace to the health of these communities, and,

Thirdly, The resulting harmful effects on tourist and resort traffic, which is rapidly becoming a major asset to this State, and,

WHEREAS, The City of Norfolk has submitted to the Federal Authorities a list of outstanding needs of this community, among which is an item calling for expenditure of $3,500,000 for the construction of suitable sewage disposal plants and certain other expenditures for the correction of pollution in said waters, and

WHEREAS, The preservation of the States' great seafood industry, within these waters, and the maintenance of their purity is a matter of National importance, which the City of Norfolk is not in a financial position to protect, now, therefore,

BE IT RESOLVED, That The Hampton Roads Chemists' Club hereby express its deep interest in this matter, and urges continued action on the part of the City of Norfolk, pledging its earnest support and cooperation to the desired end, and,

BE IT FURTHER RESOLVED, That copies of this resolution be sent to, City Manager of Norfolk, Norfolk City Council, Norfolk Association of Commerce, Norfolk Medical Society, Norfolk County Medical Society, Isaac Walton League, The Governor of Virginia, Members of the House of Representatives and State Senators of Virginia, Virginia Medical Society, Virginia Academy of Science, Virginian Section of American Chemical Society, Virginia Blue Ridge Section of American Chemical Society, The President of the United States, the Congressmen and United States Senators of Virginia and to the Press, requesting that they, individually and collectively lend their support toward the solution of this problem.

After a discussion, it was moved and carried that these resolutions be adopted.

The annual report of the President of the Woman's Auxiliary given below was then read:

MR. PRESIDENT, MEMBERS OF THE MEDICAL SOCIETY OF VIRGINIA:

I herewith present the annual report of the Woman's Auxiliary for the year ending October 10, 1935.

We have tried to concentrate mainly in the organization of new auxiliaries. Since the meeting in Alexandria we beg leave to report the addition of one more—Auxiliary to Princess Anne County Medical Society, organized April, 1935. At present we have nine Auxiliaries which comprises twenty-five counties, and also one Junior Auxiliary.

Our Committees correspond almost identically to those of the National Auxiliary. Regular meetings are held by all Auxiliaries; many of them meet in conjunction with their respective County Medical Society. At each meeting a definite educational program is carried out stressing health education. The chairman of Program and Health Education has provided all Auxiliaries with study envelopes and suggestions for program material, emphasizing particularly, yearly health examinations and the study of National and County health laws. Each county chairman has been supplied with several copies of the handbook and at least one copy of the "First Twelve Years," an historical sketch of the Auxiliary published by the Woman's Auxiliary to the American Medical Association.

Two Executive Board meetings have been held, one at the State Meeting in Alexandria, October, 1934, and the other in Richmond, March, 1935, both had almost 100 per cent attendance. The last Board meeting will be held Wednesday, October 16th, 9:00 A. M. in Norfolk.

The Chairman of Legislation reports that no progressive laws concerning health were passed at the last session of legislature but recommends three laws in which the Auxiliary should be vitally interested:

1. More interest and stricter enforcement of sterilization law.
2. Legal dissemination of birth control information.
3. Wassermann tests to be done in the public schools.

Various types of public relations work have proven of great service. In Norfolk, the Auxiliary participated in a Public Relations tea with the Woman's Club and had as their speakers, two physicians. A card party and dance was held which netted over $300.00 to be used in their philanthropic work.

The Auxiliary in Petersburg has as its project furnishing supplies for the Petersburg Hospital and also entertaining physicians at County meetings. At a recent tea and shower, hospital linens and supplies were donated. Churches and other organizations cooperated with this group and gifts in the amount of $300.00 were realized.

The Auxiliary to Mid-Tidewater Medical Society, which comprises eight counties, holds a meeting every three months. This Auxiliary furnishes a Loan Closet, consisting of articles for hospital and home and supplies necessary in caring for the sick which physicians in the rural districts have found of great service for indigent patients.

The Alexandria Auxiliary entertained members and delegates at the State Meeting there last October. Books

and paints have been contributed to Library of Day Nursery and linens furnished for Alexandria Hospital.

Auxiliary to Lynchburg Academy of Medicine contributes to the milk fund in a local school and supplies food and shoes to needy children. Books in the Braille System are being purchased for the blind.

Auxiliary to James City and New Kent Counties meets every two months. Cooperates with King's Daughters, Red Cross, Parent-Teachers' Association, Woman's Club and Tuberculosis Association.

Noteworthy work is being done by the Warwick County Auxiliary in furnishing layettes and supplies for new mothers. It sponsors prenatal educational work and cooperates with a committee to their group in Hampton. Most of the meetings are held in Newport News.

Auxiliary to Richmond Academy of Medicine holds one meeting per month followed by program. A sum is given monthly to the milk fund in public schools. Has aided the Outpatient Department of the Medical College of Virginia in furnishing glasses and dental work for indigent patients. Books are donated the children's hospitals and children are remembered with gifts at Christmas and Easter. A story telling committee also functions at this Hospital. Contribution has been given to the pathological museum of Richmond Academy of Medicine. Committees served in clerical work of early tuberculosis diagnosis campaign. Assisted local physicians committee in sponsoring and arranging programs and radio talks for Mother's Day. A card party was held in May the proceeds of which will be used for philanthropic purposes. A member was delegate to S. M. A. meeting held in San Antonio in November. She gave a stimulating report of activities and we were especially proud of the retiring President, Mrs. Southgate Leigh, Norfolk.

The Virginia Beach group launched a campaign to provide hospitalization for their county indigent. Recently, the Princess Anne County Board of Supervisors appropriated $600.00 to cover a period of six months for this work. This was a splendid achievement for a newly organized group.

The Historian and Chairman of Archives has elaborated upon and compiled new data for medical history of our State and a fireproof cabinet has been purchased for all valuable records and placed in the Academy of Medicine Building in Richmond.

Chairman of Program and Health Education cooperated with the Maternity Center Association of New York in sponsoring programs for Mother's Day in each Auxiliary throughout the State. Speakers were furnished for meetings at Parent-Teachers' Associations, churches and various clubs. A telegram from the State President was sent to this association on Mother's Day commending the work they are accomplishing in reducing the maternity death rate in this country. A reply of appreciation was received from headquarters.

The Chairman of Exhibits is arranging to have an interesting display depicting projects of various Auxiliaries. This work warrants your inspection and I trust members of the Medical Society will visit this booth.

Hygeia has been stressed by the President and Committee Chairman. Many Auxiliaries use it for program material.

The Treasurer reports a paid-up membership of two hundred and twelve for 1935 and thirty-four members have paid dues in arrears for 1934.

I have visited many Auxiliaries during the year. These trips have been most interesting and served as an inspiration for further service in their behalf. Attended annual meeting of Auxiliary to District of Columbia Medical Society held in Washington in May. Represented the Auxiliary at the last meeting of Auxiliary to American Medical Association, in Atlantic City, June, 1935.

Am grateful to editors of VIRGINIA MEDICAL MONTHLY for space in each issue for Auxiliary news and take this opportunity to thank Miss Agnes Edwards, Executive Secretary of the Medical Society, for her courtesy and ever-ready cooperation.

In conclusion, permit me to thank the President and members of our Advisory Council for their unfailing interest, guidance and council.

Respectfully submitted,
(MRS. JOSEPH) KATE C. BEAR,
President, Woman's Auxiliary to the Medical Society of Virginia.

This was ordered received and filed.

Dr. F. P. Fletcher, who took an active part in the program of the health division of the Virginia Conference of Social Work held last April, presented a resolution as follows:

RESOLVED that the President appoint a committee to arrange the program for the health division of the annual meeting of the Virginia Conference of Social Work.

This was seconded and adopted.

The House voted that letters be sent by the Secretary to Dr. J. A. White and Dr. J. Allison Hodges, of Richmond, and Dr. Isaac Peirce, of Tazewell, expressing the regret of this body at their absence, with the hope that they would be with them another year.

The President asked consent of the House of Delegates to depart from the ruling of the By-Laws and have the Councilors elected at this meeting, as it seemed useless to carry over meetings of the House to another day for only this purpose. The House consented to this arrangement.

The report of the Nominating Committee was then received as follows:

President-Elect—Dr. J. Morrison Hutcheson, Richmond.

Vice-Presidents—Dr. C. L. Harrell, Norfolk; Dr. E. M. Chitwood, Wytheville; Dr. J. A. Owen, Turbeville.

Secretary-Treasurer—Miss Agnes Edwards, Richmond.

It was moved and carried that the nominations be closed and the report accepted.

Delegates to the American Medical Association were next elected by ballot which resulted in the selection of Dr. J. C. Flippin, University, and Dr. Walter B. Martin,

Norfolk, as delegates for a term of two years, and Dr. Carrington Williams, Richmond, and Dr. I. C. Harrison, Danville, as alternates for the same time. Dr. Wright Clarkson, Petersburg, holds over as a delegate, and Dr. R. W. Miller, Richmond, as alternate.

A recess was taken that the members from the odd-numbered districts might elect their Councilors for a term of two years. These were named as follows:

1st District—Dr. Griffin Holland, Eastville.
3rd District—Dr. R. W. Miller, Richmond.
5th District—Dr. B. F. Eckles, Galax.
7th District—Dr. C. O. Dearmont, White Post.
9th District—Dr. C. B. Bowyer, Stonega.

A most cordial invitation was extended from the Augusta County Medical Society for the State Society to meet in Staunton in 1936, and this was accepted.

Upon motion of Dr. F. P. Fletcher, the House of Delegates gave the Norfolk County Medical Society a rising vote of thanks for their entertainment of the Society.

There being no further business, the House adjourned.

AGNES V. EDWARDS, *Secretary.*

Auditor's Report—October 1, 1934, Through September 30, 1935

TO THE OFFICERS AND COUNCILORS,
MEDICAL SOCIETY OF VIRGINIA,
RICHMOND, VIRGINIA.

GENTLEMEN:

We have made an examination of the books of account of the MEDICAL SOCIETY OF VIRGINIA, RICHMOND, VIRGINIA, for the fiscal year ended September 30, 1935, and submit herewith our report, consisting of the following financial statements and related comments:

EXHIBITS

"A" Balance Sheet
"B" Cash Receipts and Disbursements

Comments

A summary of the financial condition at September 30, 1935, compared with a similar tabulation as of September 30, 1934, shows:

	9-30-35	9-30-34	Increase
Cash	$2,824.33	$ 910.07	$1,914.26
Accounts Receivable	2,779.74	2,880.75	101.01*
Investments—Bonds (At Cost)	1,857.50	2,250.00	392.50*
Total Assets	$7,461.57	$6,040.82	$1,420.75
Less: Accounts Payable	459.22	1,002.49	543.27*
Net Worth	$7,002.35	$5,038.33	$1,964.02

The Cash Receipts and Disbursements for the current year are set forth in *Exhibit "B."* The Income and Expenses for the year, on a cash receipts and disbursements basis may be briefly stated as follows:

INCOME:	*Actual*	*Budget*
Medical Society	$ 4,732.60	$ 4,433.00
Medical Monthly Publication	9,334.34	8,800.00
Totals	$14,066.94	$13,233.00
EXPENSES:		
Medical Society	$ 4,196.70	$ 4,433.00
Medical Monthly Publication	8,363.71	8,800.00
Totals	$12,560.41	$13,233.00
Surplus Income for Year	$ 1,506.53	$ .....

*Decrease.

The increase of $1,914.26 in cash balance during the year is accounted for as follows:

Surplus Income (Above)	$1,506.53
Liquidating Payments on Bonds Owned	400.00
Contributions to Special Trust Fund	15.23
	$1,921.76
Less: Cost in Reinvestment of Bonds	7.50
Increase During Year	$1,914.26
Cash Balance Beginning of Year	910.07
Cash Balance End of Year	$2,824.33

We would recommend that the Surplus Income of $1,506.53, as stated above, together with the $400.00 received from liquidating payments on bonds owned, be invested in bonds in order to provide a more substantial sum as an emergency, or reserve, fund. Expenditure appropriations for the ensuing year should not be in excess of estimated revenues, based upon a conservative estimate.

We checked in detail the cash receipts and disbursements of record and established by direct communication with the First & Merchants National Bank, Richmond, Virginia, the funds on deposit. Securities owned, as listed on the balance sheet, were verified by inspection.

The amounts owing by members for dues, and accounts due for advertising in and subscriptions to the MEDICAL MONTHLY, are shown at collectible values, as estimated by the Secretary-Treasurer. No attempt was made to verify these by direct communication with debtors. The Secretary-Treasurer stated that there were no outstanding liabilities at September 30, 1935, other than those shown on the Balance Sheet, *Exhibit "A."*

Insurance protection in force consists of—

Fire—Office Furniture and Fixtures	$1,000.00
Fire—Walter Reed Home, Belroi, Virginia	1,000.00
Fidelity Bond—Secretary-Treasurer	3,000.00

Respectfully submitted,
A. M. PULLEN & CO.,
Certified Public Accountants.

Balance Sheet—September 30, 1935
Exhibit "A"

ASSETS

CASH (EXHIBIT "B"):		
On Deposit—First & Merchants National Bank:		
Checking Account	$2,325.31	
Savings Account	499.02	
		$2,824.33
DUES FROM MEMBERS:		
(Estimated Collectible Value)		
1935 Annual Dues—390 @ $5.00 each		1,950.00

ACCOUNTS RECEIVABLE:		
VIRGINIA MEDICAL MONTHLY:		
For advertising	$ 779.74	
For subscriptions	50.00	
		829.74
SECURITIES OWNED:		
Bonds—Home Owners' Loan Corp. 2¼% (Par $1,500.00)	$1,507.50	
Collateral Trust Bonds (At Par)	$1,000.00	
Less: Liquidating Dividends	650.00	350.00
		1,857.50
Total Assets		$7,461.57

LIABILITIES		
ACCOUNTS PAYABLE:		
For preparation of Medical Journal	$ 443.99	
RESERVE FOR SPECIAL FUND:		
Postgraduate Education	15.23	
		$ 459.22
SURPLUS:		
Excess of Assets over Liabilities		7,002.35
Total Liabilities and Surplus		$7,461.57

Cash Receipts and Disbursements

For the Year Ending September 30, 1935

Exhibit "B"

RECEIPTS	*Actual*	*Budget*
MEDICAL SOCIETY OF VIRGINIA:		
Dues—Members	$ 4,608.11	
Interest on Securities and Savings A/c (½)	68.24	
Royalties on History of Medicine	56.25	
Totals—Medical Society	$ 4,732.60	$ 4,433.00

DISBURSEMENTS	*Actual*	*Budget*
MEDICAL SOCIETY OF VIRGINIA:		
Salaries (Apportioned):		
Secretary-Treasurer $1,620.00		
Clerical Assistance 660.00		
	$ 2,280.00	$ 2,280.00
Rent and Telephone	349.55	350.00
Stationery and Office Supplies	69.12	80.00
Postage	217.21	260.00
Reporting Annual Meeting	146.13	180.00
Badges	33.75	40.00
Programs and Envelopes	66.00	68.00
Repairs and Replacements—Office Equipment	34.80	25.00
Audit Fee (Apportioned)	26.67	30.00
President's Expenses	47.46	25.00
Councilors' and Officers' Expenses	36.45	75.00
Attorney's Fee	500.00	500.00
Bank Service Charges and Check Tax	13.72	----
Interest on $500.00 Loan	2.56	----
Miscellaneous Expense	16.21	35.00
Department of Clinical and Medical Education	250.00	250.00
Walter Reed Commission	43.85	55.00
Committee on Scientific Work and Clinics	38.27	50.00
Committee on Child Welfare	1.20	5.00
Committee on Medical Economics	5.00	5.00
Constitution and By-Laws (Printing)	18.75	50.00
Committee on Maternal Welfare	----	5.00
Expense of Invited Guests	----	60.00
Group Societies	----	5.00
Totals—Medical Society	$ 4,196.70	$ 4,433.00

Receipts and Disbursements—*Continued*

VIRGINIA MEDICAL MONTHLY:		
Advertising	$ 5,784.56	
Subscriptions:		
Members $3,072.07		
Non-members 409.47	3,481.54	
Interest on Securities and Savings A/c (½)	68.24	
Totals—MEDICAL MONTHLY	$ 9,334.34	$ 8.800.00
Grand Totals	$14,066.94	$13,233.00
OTHER RECEIPTS:		
Liquidating Dividends on Mortgage Bonds Owned	$ 400.00	
Contributions to Special Fund for Postgraduate Education $15.00		
Add: Interest Earned .23	15.23	
Total Cash Receipts	$14,482.17	
CASH BALANCE—OCTOBER 1, 1934	910.07	
	$15,392.24	

VIRGINIA MEDICAL MONTHLY:		
Salaries (Apportioned):		
Secretary-Treasurer $1,620.00		
Clerical Assistance 660.00	$ 2,280.00	$ 2,280.00
Preparation of Journal (including Cost of Distribution	5,596.59	6,000.00
Rent and Telephone	340.57	350.00
Repairs and Replacements—Office Equipment	34.80	25.00
Stationery and Office Supplies	28.08	35.00
Office Postage	47.20	50.00
Audit Fee (Apportioned)	26.66	30.00
Miscellaneous Expense	9.81	30.00
Totals—MEDICAL MONTHLY	$ 8,363.71	$ 8,800.00
Grand Totals	$12,560.41	$13,233.00
OTHER DISBURSEMENTS:		
Bonds Purchased ($1,500.00 Par) $1,507.50		
Less: Bonds Called and Redeemed 1,500.00	$ 7.50	
Total Cash Disbursements	$12,567.91	
CASH BALANCE—SEPTEMBER 30, 1935 (Exhibit "A")	2,824.33	
	$15,392.24	

Public Health Statistics

I. C. RIGGIN, M. D.
State Health Commissioner of Virginia

The communicable disease reports received at the office of Dr. G. F. McGinnes, State Epidemiologist, for the month of October, 1935, show the following cases compared with the same month in 1934:

	1935	*1934*
Typhoid and Paratyphoid	55	78
Diphtheria	279	458
Scarlet Fever	250	425
Measles	29	222
Meningitis	8	6
Poliomyelitis	19	14
Rocky Mountain Spotted Fever	0	0
Typhus Fever	0	0
Undulant Fever	2	4
Tularaemia	4	1
Smallpox	0	11

A casual glance at the cases of communicable diseases reported to the State Health Department for the month of Qctober reveals a decided decrease in the number of typhoid and paratyphoid, diphtheria, scarlet fever and measles cases compared with the same month in 1934. In reviewing the number of cases of each of these diseases reported in October during the past twenty-five years, the decrease appears even more striking. For typhoid and paratyphoid, diphtheria and measles the incidence is the lowest on record (for this month) and for scarlet fever the lowest since 1918.

In contrast to this decrease the reported cases of meningitis, poliomyelitis and tularaemia are slightly above the average. In view of the unusual prevalence of poliomyelitis this past summer it is not surprising that the incidence is still slightly above normal. As previously stated, as long as there is unusual concentration of men in C.C.C. and transient camps one may expect a slight increase in the number of cases of meningitis. The number of reported cases of tularaemia is in keeping with the recent prediction of a slightly high incidence of tularaemia this winter.

The apparently marked decrease in smallpox in 1935 compared with October, 1934, is not significant, for the eleven cases reported in 1934 were confined to an outbreak in Washington County.

Woman's Auxiliary to the Medical Society of Va.

President—MRS. FLETCHER J. WRIGHT, 49 S. Market St., Petersburg.
President-Elect—MRS. F. D. WILSON, 5352 Studley Ave., Norfolk.
Corresponding Secretary—MRS. MEADE EDMUNDS, Walnut Hill, Petersburg.
Recording Secretary—MRS. HAROLD W. POTTER, 70 33rd St., Newport News.
Treasurer—MRS. REUBEN F. SIMMS, 2502 Hawthorne Ave., Richmond.

The Thirteenth Annual Meeting of the Woman's Auxiliary to the Medical Society of Virginia was held in Norfolk, October 15 to 17, 1935. Of singular interest was the fact that the Virginia Auxiliary was founded thirteen years ago in the very same room in the Monticello Hotel in which the 1935 meetings were held. One hundred and forty-seven members and guests registered; of these there were twenty-one Board Members and seven County Presidents.

The Pre-Convention Board Meeting was called to order at 9:00 A. M. Wednesday, October 16th by the President, Mrs. Joseph Bear, of Richmond, and at the close of this Executive Board Session, the General Meeting convened at 10:45 A. M. Mrs. Eugene Lowenberg, President of the Norfolk Auxiliary, brought greetings, and extended a cordial welcome to the visitors. Mrs. Bear then presented the guest of honor, Mrs. Rogers N. Herbert, of Nashville, Tenn., President of the Auxiliary to the American Medical Association. Mrs. Herbert brought a message of inspiration and encouragement from the National Auxiliary.

Mrs. Bear made her annual report as President covering the year's work, and this was followed by reports from Chairmen of Standing Committees and County Presidents. These reports all gave evidence of the splendid amount of work undertaken and accomplished in various sections of the State, and all were accepted with a rising vote of thanks and appreciation by the membership.

All of the resolutions of the Executive Board were ratified in the general meeting, and action will be taken upon advice of the Advisory Council. One of the resolutions recommended more interest in and a stricter enforcement of the Sterilization Law; another recommended legal dissemination of Birth Control information; and another that Wassermann Tests be given in Public Schools. Also that periodic health examinations of school children be made in the office of the family physician in preference to mass clinics.

It was also advocated that a day known as "Doctor's Day" be set aside throughout the State, to commemorate the memory or notable achievement of some member of the Medical Profession in the State.

Mrs. Allison Hodges, Chairman of the Nominating Committee, brought in the following slate of officers for the coming year:

President—Mrs. Fletcher J. Wright, Petersburg.
President-Elect—Mrs. Franklin D. Wilson, Norfolk.
Vice-Presidents—Mrs. Llewellyn Powell, Alexandria; Mrs. Hawes Campbell, Ventor; Mrs. A. G. Shetter, Richmond.
Recording Secretary—Mrs. Harold W. Potter, Newport News.
Corresponding Secretary—Mrs. Meade Edmunds, Petersburg.
Treasurer—Mrs. Reuben F. Simms, Richmond.

At the close of the meeting Mrs. Bear presented to Mrs. Fletcher J. Wright, the incoming President, a beautiful leather brief case as a token of her interest in and affection for the auxiliary.

The Post-Convention Board Meeting was held at the Monticello Hotel, Wednesday night at 8:30, and presided over by Mrs. Wright. At this time Standing Committee Chairmen were appointed, and plans were formulated for the work of the coming year.

Special commendation should be given to those responsible for the exhibits on display. These illustrated in a concrete way the activities of the local auxiliaries. They were both colorful and educational, and should prove a source of inspiration for future annual meetings.

A most delightful social program was provided by the Norfolk Auxiliary. The round of entertainments began with a luncheon on Wednesday, October 16th, at the Norfolk Country Club. This was followed by a drive through the Naval Base and a tour of the Marine Hospital. At the end of the drive, tea was served at the Colonial House, also known as the Myers Home, a lovely old residence furnished with rare and beautiful antiques. Wednesday evening a delightful reception, buffet sup-

...er and dance was held at the Ghent Club, honoring the incoming and outgoing Presidents of the Medical Society of Virginia and of the Auxiliary to the Medical Society of Virginia.

Thursday morning a golf tournament was held for the visiting women golf enthusiasts, and this was followed by an Oyster Roast at Lynnhaven Bay.

An "at home" feeling prevailed among all visitors throughout the Convention. This was not due entirely to the fact that Norfolk is the birthplace of the Auxiliary, but because of the cordial spirit and friendly hospitality which was shown by the Norfolk hostesses. The memory of the thirteenth meeting of the auxiliary, held in Norfolk, the Mother city, will long be treasured in the minds of all who attended.

Truth About Medicine

In addition to the articles previously enumerated the following have been accepted by the Council on Pharmacy and Chemistry of the A. M. A.:

E. R. Squibb & Sons

Ipral Sodium Tablets, ¾ grain.

Ipral Sodium Tablets, 2 grains.

The following product has been accepted for inclusion in the List of Articles and Brands Accepted by the Council but not Described in N. N. R. (New and Nonofficial Remedies, 1935, p. 445):

Eli Lilly & Co.

Lubricating Jelly-Lilly.

PROPAGANDA FOR REFORM

The Connell Cancer Cure.—In Kingston, Ont., Dr. Hendry C. Connell, an assistant professor at Queen's University Faculty of Medicine, has announced a new treatment for cancer. It has been heralded by the press as a "cancer cure." Kingston has turned over part of its municipal hall for the enlargement of his research work and the Department of Health of the Ontario government is collecting cancer tissue from all parts of Canada so that Dr. Connell can use it in making up his preparation. He calls it "Ensol." The background of this performance is said to be some experiments made by Dr. Connell four years ago in an attempt to control cataract. He claims to have developed a substance which would break down cataractous lens tissue without reacting on other proteins. By a similar process, he says, he developed an enzyme which would break down cancer tissue. In a letter to *The Journal of the American Medical Association,* Dr. Connell stated that he had promised to submit a complete statement of his work to the *Canadian Medical Association Journal* and requested the American Medical Association to send a representative to witness his results. He also submitted a statement alleged to be an account of the method of preparation of his product and an account of his results, which include merely some regression of cancer tissue. The methods pursued by Dr. Connell in promotion of his product reveals procedures more like those of the charlatan than of the scientific investigator. Moreover, his statement of the method of preparation of his product is so incomplete and confused as to make duplication of his work impossible. The results he claims are similar to those which have been obtained with a half-dozen other methods. In a few cases there are apparently temporary remissions due to damage of the blood vessels in the tumor. Results just as good occur with the methods used by most of the cancer quacks. There does not appear to be any real evidence that an anti-tumor enzyme is present in the mixture. Notwithstanding these considerations, newspapers have heralded widely Dr. Connell's claims. Great numbers of sufferers from cancer have been stimulated to false hopes. Time is the true tester of cancer cures—yet newspapers continue to lead cancer sufferers to promoters of cancer cures that have been tested only a few weeks or months. If Dr. Connell really realized his responsibility he would have waited to inform the newspapers until he knew whether or not his "discovery" actually had merit. (*J. A. M. A.*, October 5, 1935, p. 1122.)

Standardization and Labeling of Liver and Stomach Preparations for Use in the Treatment of Pernicious Anemia.—The following statement concerning the standardization of liver and stomach preparations has been adopted by the Council: Standardization of preparations depends on the reticulocyte response following the uniform daily administration of the product to a patient with pernicious anemia. The test patient should preferably have no complicating infection, diarrhea, marked arteriosclerosis or extensive neurologic changes. The red blood cell count should be between 1,000,000 and 3,000,000 per cubic millimeter and the patient should not be in a spontaneous or induced remission, nor should transfusion have been performed recently. The patient should not have received potent anti-anemic material or arsenic within a month. Daily reticulocyte counts for one day before and for ten days after the test has been started should be made. During days of marked rise of reticulocytes, two counts a day may be necessary to determine the maximal value. The acceptable standard response is set forth in the accompanying table.

Initial Red Blood Count Million per Cu. Mm.	Minimum Reticulocyte Response Per Cent
1.0	30
1.5	18
2.0	12
2.5	7
3.0	4

The figures given have been obtained by the daily oral administration of material derived from 300 to 400 gm. of liver, or of 30 to 40 gm. of desiccated stomach, or by the daily parenteral injection of material derived from 10 to 15 gm. of liver. The test should be conducted by

XUM

uniform daily administration for ten days of the least amount of material expected to yield the standard reticulocyte response. Should there be no reticulocyte response or a lesser response than the required minimum, within the ten-day period, that amount of a preparation of established potency known to correspond to the foregoing standards should be administered in uniform dosage for ten days. The purpose of this control is to establish the reactivity of the patient to known amounts of active principle. In assaying an orally administered product an orally administered standard should be used, and with a product for parenteral use a parenterally administered standard should be employed. The principles underlying the determination of potency of autolyzed liver preparations, stomach tissue extracts or combinations of liver and stomach tissue or extracts are the same. In each case the least daily amount of the preparation administered that is necessary to produce the standard reticulocyte response within the ten-day period should be determined. This daily amount serves as a basis for labeling. Satisfactory responses to similar tests should be obtained in at least three patients. (*J. A. M. A.*, October 19, 1935, p. 1269.)

Vitamin D in Common Foods.—The sources of vitamin D or vitamin D effects are now so easily available and so widely distributed that the question of an adequate supply would hardly seem to concern greatly any average American. Nevertheless, pediatricians who see constantly the effects of an inadequate supply of vitamin D are inclined to deprecate the manner in which vitamin D is made available and in which it is used by the vast majority of people. A recent survey on the amounts of vitamin D in common foods indicates that, with the exception of egg yolk and butter, none of the ordinary foods contain any substantial amount of vitamin D. Few human beings in large Northern cities obtain any substantial amount of sunshine except possibly in summer. The main source of vitamin D must therefore come to the human being from exposure to ultraviolet rays, from natural sources of this vitamin or from extra vitamin D obtained through materials that have been enhanced in their vitamin D potency. Nutritional authorities believe that man has been deprived of the vitamin D that he used to get by natural methods and that insistence on an additional source of this vitamin will be for the benefit of mankind. Certaialy, so far as the growing child is concerned, some additional vitamin D may be necessary everywhere. Quite recently the thought that an oversupply of vitamin D would be developed in this manner and that the eventual effects of this oversupply would be toxic has been reemphasized in various places. Thus far the evidence seems to indicate little likelihood of harm. (*J. A. M. A.*, October 26, 1935, p. 1354.)

Book Announcements

Modern Motherhood. A Book of Information on Complete Maternity Care: Prenatal—Delivery—After-care. By CLAUDE EDWIN HEATON, M. D., F. A. C. S. With an introduction by Hazel Corbin, Director of the Maternity Center Association. Farrar & Rinehart, Inc. New York. 1935. Octavo of 271-xix. Cloth. Price, $2.00 net.

This book contains 271 pages. It is well written, interesting to read, and the author has made a noteworthy contribution to the literature on childbirth for lay readers. In my opinion it should also be useful to physicians, medical students, and nurses.

In the preface the author states "An attempt is made in this book to give a frank presentation of our present knowledge of childbirth to lay readers particularly, expectant mothers.

Dr. Heaton has clearly outlined a modern standard for good maternity care and what the average patient expects of her physician. He has explained in a clear concise way many of the questions which expectant mothers often ask.

This book is worth recommending to women desiring literature on motherhood.

H. H. WARE, JR.

Maternal Mortality in Philadelphia. 1931-1933. Philadelphia County Medical Society. Report of Committee on Maternal Welfare. Philip F. Williams, M. D., Chairman. 1934. Octavo of 143 pages. Paper. Price, $1.00.

This report of Maternal Mortality in Philadelphia for three years contains many interesting facts. It is an honest attempt to classify correctly the puerperal deaths in Philadelphia. In discussing maternal deaths the committee states there are three groups:

1. Those cases in which death is directly due to pregnancy, labor or the puerperium.

2. Those cases in which pregnancy and labor were a contributing cause, but in which there was another primary cause.

3. Those deaths in which pregnancy and labor had no contributing effect.

Under "Preventability Due to Patient" the authors discuss certain conditions where the responsibility for the prevention of death should be assigned to the patient. Included in this group are self-induced abortions, severe toxemias and other grave diseases in which the patient refused early

interruption of pregnancy. Also those individuals who refused prenatal or hospital care.

The maternal death rate was 7.09 per thousand total births. Eliminating seventy-eight non-obstetrical causes of death and calculating the rate on live births, the puerperal death rate was 6.69 per thousand live births.

In one hospital there were 4,850 deliveries without a craniotomy but with a Caesarean Section incidence of 4.8 per cent. In another hospital with 1,423 deliveries there were twenty-two Caesarean Sections and three craniotomies.

Abortions accounted for a little more than 25 per cent of the maternal deaths.

The total death rate per thousand live births was 6.1 in white women and 7.2 in negro women.

H. H. WARE, JR.

A Marriage Manual. A Practical Guide-Book to Sex and Marriage. By HANNAH M. STONE, M. D., Medical Director of the Birth Control Clinical Research Bureau and of the Marriage Consultation Centers at the Community Church and Labor Temple, New York. And Abraham Stone, M. D., Adjunct Urologist at the Sydenham Hospital; Co-Director of the Marriage Consultation Centers at the Community Church and Labor Temple, New York. New York. Simon and Schuster. 1935. Octavo of 334-xi pages. Illustrated. Cloth. Price, $2.50.

Books on etiquette probably are necessary. This book on the etiquette of marriage or rather reproduction is based in the main upon sound physiological facts. Some of the figures are startling—for instance, that each ovary at birth contains several hundred thousand ova or that two to five hundred million spermatozoa are discharged at one time.

The book is gotten up in the form of answering the questions of two young persons contemplating matrimony. It is, however, arranged in a systematic manner and discusses fitness for marriage, the anatomy of the male and the female sex organs, the mechanism of reproduction, the prevention of conception, fertility, artificial insemination, compulsory and voluntary sterilization, abortions, the art of marriage, sexual disharmonies and health in marriage. It is hard to visualize such consultations, but if they become common it may be necessary for doctors to read the book so as to be able to answer the questions that may be asked them. So long as the authors stick to the known facts of physiology, one cannot take exception to what is said. The authors' discussion of premarital exercise of the sexual function is unfortunate. To bridge over the space between physiological maturity and the time when "economic security" permits of marriage the authors suggest a "Junior marriage" with economic independence of the contracting parties. At the expiration of a specified length of time or at the occurrence of a pregnancy, this union would automatically assume all aspects of our present form of marriage with full economic responsibility. This smacks of the Utopian ideas of some of our political economists. If it came to be socially acceptable I imagine many young couples would wake up to a realization that it was an economic trap.

M. P. RUCKER.

Public Health Administration in the United States. By WILSON G. SMILLIE, A. B., M. D., Dr. P. H., Professor of Public Health Administration, School of Public Health, Harvard University. New York. The Macmillan Company. 1935. Octavo of xvi-458 pages. Illustrated. Cloth.

This book deals with the beginning of public health in United States and the functions of a health organization—such as safe and adequate water supply; safe and adequate sewage disposal; food supply; garbage and refuse; housing and city planning; safeguards in protecting human life and the control of sources of disease transmission; laboratory service and vital statistics.

"No subject is more intimately connected with the happiness and prosperity of a people than the degree of public health they enjoy." (Lemuel Shattuck, "A Census of the City of Boston." 1845.)

This book is replete with information on all subjects pertaining to public health. There are chapters on the administrative control of communicable diseases, including that of diphtheria, typhoid, tuberculosis, venereal disease, poliomyelitis and many others.

There are chapters devoted to the basic activities of a health organization, the organization of public health programs, which includes such information as the date of establishment of the various health departments, health education, small city set-up, as well as a rural one.

To my mind this is a book which should be read and studied, not only by those actively engaged in the public health field, the private practitioner, but various welfare organizations as well.

C. L. OUTLAND.

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The Individual Criminal. Studies in the Psychogenetics of Crime. By BEN KARPMAN, M. D., Psychotherapist, St. Elizabeth's Hospital, Washington, D. C.; Professor of Psychiatry, School of Medicine, Howard University, Washington, D. C. *Volume One.* Cases 1-5. Copyright, 1935. Nervous and Mental Disease Publishing Company, 3617 Tenth Street, N. W., Washington, D. C. Octavo of ix-317 pages and charts. Cloth. Price, $4.50.

Frequently during the past quarter century, psychiatrists, penologists, judges and probation officers have raised the question: Is delinquency a disease, a symptom complex, or only a symptom common to many diseases?

In the previously published, "Case Studies in the Psychopathology of Crime," (giving the life stories of five criminals), Dr. Karpman presented a source reference in delinquency. In our review of this book we voiced the opinion that its value would depend largely upon the excellence of a companion volume, "The Individual Criminal," which the author stated would be shortly forthcoming.

In "The Individual Criminal" now presented, the author parallels essentially the previous book, giving an excellent discussion and adequate interpretations in the case of each of the five criminals studied.

The author shows the part played by broken home situations, the social milieu of the criminal and other factors such as emotional entanglements, jealousy, revenge, insecurity, lack of emotional emancipation, etc.

Some may take issue with the author's conclusion that crime itself does not appear to be just a "psychopathy," but it arises on the basis of a highly specific form of neurosis.

The author closes the book with suggestions regarding the psychotherapeutic approach to the criminal personality, and other measures leading to social rehabilitation of the delinquent.

One might say about Dr. Karpman's studies in crime that in the first volume a promise was made; in this book it has been amply fulfilled.

HARVIE DEJ. COGHILL.

Books Available to Doctors.

Recent acquisitions to the Library, Medical College of Virginia, Richmond, as well as other books, may be borrowed for a limited time, by members of the profession in Virginia, the only charge being return postage:

Aykroyd, W. R.—Three philosophies (Lavoisier, Priestley, and Cavendish).
Balderston, L. R.—Housekeeping workbook.
Banister, H.—Psychology and health.
Barnard, W. G.—Technique of a post-mortem examination.
Beckman, H.—Treatment in general practice.
Blatz, W. E.—Nursery education, theory and practice.
Bridges, M. A.—Food and beverage analyses
Campbell, A.—Oxygen and carbon dioxide therapy.
Cantonnet and Filliozat—Strabismus.
Carrel, A.—Man, the unknown.
Chase, S.—Government in business.
Chayer—School nursing.
Colwell, H. A.—The method of action of radium and X-rays on living tissues.
Cowgill, G. R.—The vitamin B requirement of man.
Crew, H.—The rise of modern physics.
Cruickshank, J. N.—The toxaemias of pregnancy.
Curtman, L. J.—Qualitative chemical analysis.
Dandy, W. E.—Benign, encapsulated tumors in the lateral ventricles of the brain.
Dawson, S.—Intelligence and disease.
Dawson—Physiology of physical education.
Devereux, R. T.—Good food at low cost.
Dobell, C.—A report on the occurrence of intestinal protozoa in the inhabitants of Britain.
Feldman, W. M.—Biomathematics.
Fischel, M. K.—The spastic child.
Gerlach, W. & W.—Clinical and pathological applications.
Gesell & Thompson—Infant behavior.
Graham & Singer—Thoracic surgery.
Green, R.—Lectures on the development and use of the synthetic and anti-malarial drugs.
Greenwood—Epidemics and crowd-diseases.
Haggard & Greenberg—Diet and physical efficiency.
Haldane & Priestley—Respiration.
Hall, Sir D., et als.—The frustration of science.
Handbook of chemistry and physics, 20th ed.
Harrison, T. R.—Failure of circulation.
Hart, P. Darcy—The value of tuberculin tests in man with special reference to the intracutaneous test.
Harvard Group—Current economic policies.
Henderson, V.—Medical and surgical asepsis.
Hill, L., et als.—The Kata-thermometer in studies of body heat and efficiency.
Hinhede, M.—Gesundheit durch richtige und einfache Ernährung.
Hogben, L.—Nature and nurture.
Homans, J.—Textbook of surgery.
Jaquin, W. N.—Our revealing hands.
Jelliffe & White—Diseases of the nervous system, 6th ed.
Jones—Principles of guidance.
Kerr, D. J. A.—Forensic medicine.
Kerr, J. G.—Education and biology.
Kolthoff, I. M.—Colorimetric and potentiometric determination of pH.
Lacour, P. R.—Recherches sur la malaria-floculation de Henry.
Levin, L.—Living along with heart disease.
Liddell, H .S., et als.—The comparative physiology of the conditioned motor reflex.

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Editorial

What to Read.

The average young man passes from his medical school into the full stature of his professional life with the oft-repeated admonition ringing in his ears not to read textbooks but medical journals. With an air of superiority he puts old friends aside and begins to devour eagerly the contents of the several medical journals to which he has access. A few years later, if he takes stock of himself and of what he has read, it becomes apparent to him that much of it has lacked continuity, that there are gaps in his information, that many articles have been in the nature of preliminary reports whose final chapters have never been forthcoming, that there has been much that was never confirmed, much that was contradictory, much that was later disproved. America publishes more than half the medical journals of the world, and it requires considerable discrimination to read profitably among the hundreds of medical publications issued in this country alone.

The fallacy of reading too slavishly among medical journals ultimately becomes apparent to the seasoned practitioner, and he turns again to textbooks and systems of medicine. He is careful that they are recent publications and that their authors are men of established reputation. If every two or three years he reads through a textbook like Osler's *Principles and Practice of Medicine,* Musser's *Internal Medicine,* or Cecil's *Textbook of Medicine,* he will come upon many new facts, greatly enlarge his knowledge and fortify himself against the danger of too readily accepting what has not or will not stand the test of time. A good textbook read through and through offers the best guide to discriminating reading.

What Doctors Are Talking About.

The Fifty-second Annual Meeting of the American Clinical and Climatological Association, gathering recently at Princeton, N. J., was productive of contributions of considerable importance. Ralph H. Major, of Kansas City, demonstrated from clinical as well as experimental experience that insulin may be absorbed successfully and utilized when applied by spray to the nasal mucous membrane. This finding if confirmed by others represents an important advance in a hitherto fruitless search for some other manner of administration of insulin than by the hypodermic route. Major found that the nasal mucosa absorbed insulin when mixed with some glycerin-like substance. He employed mixtures of both ethylene-glycol and trimethylene-glycol with insulin.

Cyrus C. Sturgis of Ann Arbor summed up eight years of experience in the treatment of 577 cases of pernicious anemia. He stressed the usefulness of liver extract given intravenously or intramuscularly—an advance based on a better control of therapy and the convenience of infrequent treatment. In the

case of intravenous therapy, 20 c.c. of the extract every three or four weeks is sufficient to maintain the proper red cell and haemoglobin levels. He pointed out the indications for iron and transfusion in pernicious anemia therapy and gave it as his opinion that the administration of hydrochloric acid or attention to the general diet was of little moment. He pointed out that 50 per cent of the deaths from pernicious anemia were associated with spinal cord changes but could offer no better guide to therapy in this type of case than to give large doses of liver extract and to keep the red blood cell count well above five million.

William D. Stroud of Philadelphia reported an important comparative study on the potency of various new glucosids of digitalis, standardizing them against whole leaf preparations of digitalis. He reached the conclusion that Verotigen grains 1/240, Digitaline Nativelle grains 1/600, Digoxin grains 1/240, and the whole leaf preparation of digitalis grains 1½, are clinically of equal effect in slowing the heart and in relieving the usual symptoms of congestive heart failure.

L. W. Gorham of Albany pointing out the difficulty often encountered in a differential diagnosis between acute occlusion of the pulmonary and coronary arteries, stressed the importance of a history carefully reviewing the possible causes of pulmonary thrombi. He pointed out as valuable X-ray evidence the narrowing of the intercostal spaces, the unilateral high diaphragm and the shifting of the mediastinum to the affected side.

Robert L. Levy of New York in discussing sudden death in patients with coronary sclerosis and thrombosis, was of the opinion that coronary thrombosis was not the immediate cause of death. He attributed death to what he designated acute myocardial ischemia and cessation of cardiac activity. He thought the same mechanism was operative in sudden death in cases of aortic insufficiency—a diastolic pressure insufficient to prevent fatal myocardial ischemia.

Joseph H. Pratt of Boston called attention to the newer methods of gastric diagnosis, gastroscopy by the semi-flexible gastroscope, relief methods of gastric roentgenology using small amounts of barium and small aimed exposures, facilitating the visualization of the lining architecture of the stomach which is naturally disturbed early in gastric pathology.

Pulmonary diseases were discussed by a number of recent workers in this field, among them W. L. McCann and J. A. Miller. Attention was focused on pulmonary fibrosis and emphysema. Functional rather than anatomical methods of approach were emphasized and it was quite evident that a better understanding of diseases of the lungs is being sought through a better comprehension of the mechanism of pulmonary physiology.

The outstanding contribution was made by Charles H. Lawrence of Boston who reported striking results in the treatment of acne vulgaris obtained by the administration of an anterior pituitary like hormone. After reviewing some previous conceptions of acne and disposing of the infection theory by pointing out that it has been shown that the acne bacillus of Sabouraud is present in normal sebaceous material, Lawrence related the disease to endocrine disorders by noting its appearance at puberty in a large proportion of young people and its frequent improvement with correction of menstrual disorders. He began his studies with investigations of biopsy material taken from the skin of sufferers from acne and was able to demonstrate a striking hyperplasia of epithelial cells at the mouths of the ducts of the sebaceous glands with associated plugging of the ducts with inspissated material.

His clinical studies led him to seek for some association of acne with endocrine dysfunction. The Esterin assays of the urine in sufferers from acne was known to be low. In some of his cases genital hypoplasia could be demonstrated and in others there was a flat sugar tolerance curve indicative of hypopituitarism.

Assuming that acne was essentially an endocrine disturbance with obstructive hyperplasia of the epithelial cells of the ducts of the sebaceous glands associated with hypofunction of the anterior lobe of the pituitary, Lawrence began the treatment of acne with a hormone. The preparation he employed was Antuitrin S in 2 c.c. doses every second day. His results were on the whole excellent. Out of thirty cases treated, ten were cured and ten were improved. In one instance an extensive eruption with disfiguring cysts and comedones, which in other hands had long resisted X-ray and all local forms of treatment promptly yielded to pituitary extract.

Acne is said to afflict at least one-third of the youth of both sexes of the age of puberty. In many instances it becomes an embarrassing, often a disfiguring, disease, and any measure which will prove

more effective than our present therapeutic procedures will be welcomed.

Artificial Pneumothorax in Pneumonia.

Fifteen years ago Friedmann and David in Germany independently announced the results of artificial pneumothorax in the treatment of acute unilateral lobar pneumonia. At the time their results made very little impression and ten years elapsed before this method of treatment was again taken up. Within the last few years in this country and in Great Britain some two score reports have appeared in the literature. Altogether about two hundred cases of pneumonia have been reported as having been treated by this method. The method has now reached the stage where it is necessary to make some more definitive evaluation of its usefulness. There seems to be little doubt that air injected into the pleural space of a patient suffering with acute lobar pneumonia associated with pleurisy often miraculously relieves pain and cough and converts a pathetic sufferer into a comfortable patient able to sleep and to raise expectoration from his chest without more than ordinary discomfort. This in itself may be sufficient justification for the procedure, but still more important claims have been made for artificial pneumothorax in pneumonia. Artificial crisis frequently follows air administration. Temperature and leukocyte count fall and resolution rapidly follows. More careful immunological studies are needed in explanation of this phenomenon. Does compression of a diseased lung favorably affect the incidence of bacteremia through the slowing of the blood and lymph flow through the lungs, through immobilization and other factors? These and other related questions are yet to be answered. This much may be said. Cases need to be carefully selected with due regard to the location of the lesion, the duration of the disease, the activity of the process and the presence of complicating factors, and no one should undertake this type of treatment without realizing that of itself it carries certain elements of risk and that whereas it may affect astonishingly the course of pneumonia in the particular patient, it has not been shown by any means to affect the general mortality from the disease.

President's Message

New Committees and Other Work.

TO THE MEMBERS OF THE MEDICAL SOCIETY OF VIRGINIA:

There has never been a more revolutionary age in medicine than there is today.

My predecessor, Dr. F. H. Smith, has already sounded the keynote of the present trend of thought along the line of Medical Economics in his Message in the October issue of the JOURNAL. Social agencies everywhere are working to improve the social order; to teach us better how to live. The Virginia Conference of Social Work has undertaken to motivate the formation of the Virginia Welfare Council, whose activities are divided into:

Education and Recreation
Child Welfare
Family Welfare
Delinquency
Mental Hygiene
Public Health and *Medical Care.*

We are citizens of this great Commonwealth first, then physicians. We cannot shirk our duty to our country as citizens, hiding behind our professional title and taking no part in other phases of social service.

Social Service is defined, by Dr. James Bryant Corant, President of Harvard University as "A study of all phases of individual needs, and the service or ministration of those needs." We, therefore, have our responsibilities in every branch of social service as citizens; and we have our *special* responsibilities in our relation to Public Health and Medical Care—including child and maternal welfare, mental hygiene, and certain phases of criminology, on account of our *peculiar fitness.*

It is evident, therefore, that those sections of social welfare for which physicians by training are peculiarly fitted, should be under control of organized medicine—The Medical Society of Virginia.

Dr. Fred P. Fletcher, Jr., Chairman of the Health Division of the Virginia Conference of Social Work, presented at the meeting of the House of Delegates of the Society, October 16th, the following resolution: Resolved, that the President appoint a Com-

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mittee to arrange the program for the Health Division of the annual meeting of the Virginia Conference of Social Work. This resolution was passed unanimously and as the meeting takes place in Roanoke in March, I am appointing this committee as follows:

Dr. Hugh H. Trout, *Chairman,* Roanoke.
Dr. Carrington Williams, Richmond.
Dr. Wyndham B. Blanton, Richmond.
Dr. Greer Baughman, Richmond.
Dr. Wm. H. Higgins, Richmond.
Dr. Harrison Picot, Richmond.
Dr. Samuel Anderson, Richmond.
Dr. Basil Jones, Richmond.
Dr. Fred P. Fletcher, Jr., Richmond.
Dr. Franklin D. Wilson, Norfolk.
Dr. C. Lydon Harrell, Norfolk.
Dr. W. P. Jackson, Roanoke.
Dr. A. M. Showalter, Christiansburg.

Dr. Smith recognized the need of medical supervision along this line of social service, when he appointed a large committee on Child Welfare which I am also appointing as follows:

Dr. W. P. Jackson, *Chairman,* Roanoke.
Dr. L. T. Royster, University.
Dr. F. D. Wilson, Norfolk.
Dr. C. E. Conrad, Harrisonburg.
Dr. R. D. Bates, Newtown.
Dr. J. B. Stone, Richmond.
Dr. P. W. Miles, Danville.

There has also been a demand that the Committee on Maternal Welfare be reappointed, and it has been brought out that greater interest in the society meetings and better papers can be gotten up, if we have a committee to look after this great branch of medicine.

I am therefore reintroducing this committee and naming it as follows:

Dr. T. J. Williams, *Chairman,* University.
Dr. C. J. Andrews, Norfolk.
Dr. Greer Baughman, Richmond.
Dr. J. O. Boyd, Roanoke.
Dr. F. O. Plunkett, Lynchburg.

Since our By-Laws lay down the following precept (Art. 7, section 2): Each Councilor shall be the organizer, advisor and censor for his district, and shall visit each component society in his district once a year; and since the President shall visit as many component societies as possible during the year in the interest of the Society; and since the Council and House of Delegates at the last session stressed the importance of the President and President-Elect visiting the component Societies—and even set aside a definite amount of money to help defray their expense for this purpose, I deem the appointment of a special committee on group societies entirely unnecessary. I will, therefore, not reappoint this committee.

Although we have no funds from outside sources as in times past to help us carry on our postgraduate work; and our own treasury is depleted, I hope the work so successfully begun a few years ago will be continued. These lectures and clinics have been carried on very successfully in other states at very little cost. And we are looking to our two great medical schools to point the way.

But money does not mean all in life. The greatest minds our country has ever produced if they did not actually scorn riches certainly did not let it influence them in their great work for humanity. We haven't the money but we have the brains and the will to carry on, and I am hoping for, and expecting great constructive work this year.

Our legislature meets in a short time; several bills are in the making for the improvement and benefit of our profession. We cannot get anywhere by sitting still and "letting George do it for us" or what is worse paying him to do it. Legislation, for our consideration, will be printed in this JOURNAL in due time, and it is up to us as individuals as well as organized component bodies to do our bit in explaining our needs and pointing out our necessities. I have always found our representatives more than glad to listen to us, and if our cause is just and we individually get down behind our bills we will get them through.

Effort is already under way to make our Society meetings more attractive, and it behooves each one of us to boost our Society. We must not leave it altogether to the Councilors, the President, and President-Elect.

Let us remember that every law for our protection, every privilege, every law for our safety and the protection of our patients and friends against the unscrupulous methods or practices of quacks and charlatans, was put on the statute books by the efforts of the organization which we are urged to uphold and work for.

P. ST. L. MONCURE, M. D.,
President, Medical Society of Virginia.

Department of Clinical and Medical Education of the Medical Society of Virginia

The sixteenth Postgraduate Clinic conducted by the Department of Medicine of the University of Virginia in cooperation with the Department of Clinical and Medical Education, was held at the University of Virginia Hospital on Friday, November 15th. High lights of the program were clinics by Dr. J. E. Wood on Pregnancy and Hypertension, Dr. V. W. Archer on Present-Day Treatment of Malignant Diseases, Dr. Staige D. Blackford on Indigestion, and Drs. J. C. Flippin and James R. Cash on Clinico-Pathological topics. The special feature was a surgical clinic by Dr. Carrington Williams, of Richmond.

The names and addresses of the *physicians* attending the clinic follow:

Dr. A. E. Turman, Richmond.
Dr. J. F. Thaxton, Tye River.
Dr. R. E. Booker, Lottsburg.
Dr. J. C. Coulter, Charlottesville.
Dr. H. G. Byrd, Louisa.
Dr. C. B. Fox, Monterey.
Dr. D. M. Kipps, Front Royal.
Dr. E. L. Grubbs, Front Royal.
Dr. W. O. Cox, St. Paul.
Dr. G. F. Simpson, Purcellville.
Dr. G. H. Musgrave, Leesburg.
Dr. H. L. Baptist, Ivy.
Dr. C. D. Bennett, Chatham.
Dr. Elizabeth B. Sherman, Front Royal.
Dr. O. W. Carper, Front Royal.
Dr. Anita Lotti, Charlottesville.
Dr. Glenn C. Campbell, Staunton.
Dr. C. P. Obenschain, Staunton.
Dr. G. R. Elliott, Orange.
Dr. C. M. Rice, Sweet Briar.
Dr. W. H. Turner, Round Hill.
Dr. Marshall J. Payne, Staunton.
Dr. J. E. Womack, Staunton.
Dr. H. J. Morton, Stuart's Draft.
Dr. R. S. Griffith, Basic City.
Dr. W. A. Kyger, Free Union.
Dr. John E. Cole, Fredericksburg.
Dr. T. W. Dew, Fredericksburg.
Dr. Carroll H. Iden, Berryville.
Dr. W. O. Smith, Altavista.
Dr. Frank Tappan, Berryville.
Dr. C. O. Dearmont, White Post.
Dr. R. F. Weems, Harrisonburg.
Dr. B. L. Carleton, Newport News.
Dr. C. W. Scott, Newport News.
Dr. R. L. Page, Batesville.
Dr. Carrington Williams, Richmond.
Dr. William Walker, Scottsville.
Dr. J. F. Stover, Doe Hill.
Dr. C. E. Watson, Broadway.
Dr. L. G. Roberts, Moorman's River.
Dr. H. F. White, Fishersville.
Dr. Elizabeth Cole, Norfolk.
Dr. Ruth Mason Grigg, Petersburg.

An appropriation was made by the Society, at its annual conference in Norfolk, to the Department of Clinical and Medical Education to carry forward its postgraduate program during the year. The work will go forward under the new chairman of the committee, Dr. F. H. Smith, of Abingdon, Va. Dr. Smith will be glad of suggestions for graduate clinics or other graduate educational activities.

GEORGE B. ZEHMER,
Executive Secretary.

Proceedings of Societies

Northern Neck Medical Association.

The semi-annual meeting of this association was held in Irvington, Va., on October 24th, with Dr. R. E. Booker, Lottsburg, president, presiding. There was a good attendance of members as well as doctors from other parts of the State. Officers elected at this time are: president Dr. Lee S. Liggan, Irvington; vice-presidents, Dr. M. C. Oldham, Lancaster, and Dr. C. Y. Griffith, Mt. Holly; and secretary-treasurer, Dr. E. T. Ames (re-elected), Montross.

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The Culpeper County Medical Society

Is the latest addition to the component societies of the Medical Society of Virginia, having been organized by the doctors of that county at a meeting held in Culpeper, Va., on October 5th. Charter was granted this organization at the Norfolk meeting of the State Society. The following officers were elected for the ensuing year: President, Dr. D. W. Kelly, Jr., Culpeper; vice-president, Dr. J. E. Parks, Brandy; and secretary-treasurer, Dr. O. K. Burnette, Culpeper. Other charter members are: Dr. J. R. Boldridge, Rixeyville; Drs. H. T. Chelf, E. B. Dovell, Granville Eastham, and J. L. Stringfellow, all of Culpeper; and Dr. E. Y. Willis, Remington.

The Augusta County Medical Association

Held its regular quarterly meeting in Staunton on November 6th, and the following program was presented: "Considerations in the Nitrogen Content of the Blood" by Dr. T. R. Rolston, New Hope; "Factors in the Prevention of Suicide" by Dr. Rex Blankenship, Richmond; and "Chronic Constipation" by Dr. O. L. Hite, Richmond.

Dr. Guy Fisher, Staunton, was named chairman of the committee on arrangements for the meeting of the Medical Society of Virginia to be held in Staunton, in the Fall of 1936.

Dr. T. R. Rolston, New Hope, and Dr. Alexander F. Robertson, Staunton, are president and secretary, respectively, of this Association.

The Roanoke Academy of Medicine

Held its regular meeting on November 4th, with an attendance of about sixty members and ten visitors. Dr. J. Paul Kent, Roanoke, was elected to membership at this time. An interesting scientific program was given and also a report from the Norfolk meeting of the State Society. Dr. George S. Hurt and Dr. Blanton P. Seward, both of Roanoke, are president and secretary, respectively.

Fourth District Physicians Hold Meeting.

A meeting of the physicians of the fourth district of the Medical Society of Virginia was held, in conjunction with the Postgraduate Medical Society of Southern Virginia and the Department of Clinical and Medical Education of the State Society, in Petersburg, on November 12th, with the president, Dr. H. E. Whaley, Victoria, presiding.

The meeting was opened with a surgical clinic at the Petersburg Hospital conducted by Dr. J. Bolling Jones. This was followed by a review of the scientific exhibits by Drs. W. Ambrose McGee and A. I. Dodson, of Richmond, and Drs. Wright Clarkson and Allen Barker, Petersburg. A film on cancer control was shown by the American Society for the Control of Cancer. Papers were then presented by Dr. J. Shelton Horsley, Dr. J. B. Jones, Dr. T. S. Jennings, and Drs. T. G. Hardy and Ralph W. Jack.

A photograph contest was held before dinner and the meeting was closed with a business session.

Dr. C. E. Martin, Emporia, is secretary of the Postgraduate Society and Dr. Wright Clarkson, Petersburg, chairman of the steering committee.

South Piedmont Medical Society.

A meeting of this Society was held in South Boston, Va., on November 19th, with the president, Dr. J. J. Neal, Danville, presiding. About fifty members and guests were in attendance. A symposium on "Preventive Medicine" was presented, and papers were read by Dr. D. C. Steelsmith, Health Office, Halifax-Pittsylvania County Unit; Drs. F. R. Hopkins, C. H. Patterson, J. W. Devine, and D. P. Scott, of Lynchburg; Drs. D. C. Smith, and D. C. Wilson, of University; Drs. R. W. Garnett and Samuel Newman, of Danville; and Drs. Thomas Wheeldon and Robert Mazet, Jr., of Richmond.

Dr. J. A. Owen, Turbeville, is secretary of this Society.

The Petersburg (Va.) Medical Faculty,

At its annual meeting in November, elected the following officers for the ensuing year: President, Dr. William A. Reese; vice-presidents, Dr. W. Allen Barker and Dr. Mason Romaine; secretary-treasurer, Dr. Wilbur M. Bowman (re-elected). The court medicale which is composed of the president and the four past presidents now includes Dr. W. A. Reese, Dr. D. D. Willcox, Dr. W. B. McIlwaine, Dr Meade Edmunds, and Dr. Claiborne T. Jones. All are of Petersburg.

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The Virginia Peninsula Academy of Medicine

Met on November 18th and there was an attendance of more than fifty doctors from the Virginia Peninsula. At this time, Dr. Charles R. Austrian, of the Johns Hopkins Medical School, spoke on "The Differential Diagnosis of Pulmonary Tuberculosis."

Dr. E. L. Alexander, Newport News, is president of the Academy, and Dr. Frank Bacon, Hampton, is secretary.

News Notes

Southern Medical Association.

At the annual meeting of this Association, held in St. Louis, November 19th-22nd, Dr. Fred M. Hodges, Richmond, Va., was elected President to succeed Dr. H. Marshall Taylor, Jacksonville, Fla. The vice-presidents elected are Dr. Quitman U. Newell, St. Louis, and Dr. Joseph E. Knighton, Shreveport; secretary-manager, Mr. C. P. Loranz, Birmingham (re-elected); and Dr. and Mrs. M. Y. Dabney, Birmingham, were also re-elected as editors of the *Southern Medical Journal*. Baltimore was selected as the place of the 1936 meeting.

The following Virginia doctors were made chairmen of sections: Dr. I. A. Bigger, Richmond, of section on surgery; Dr. Frank H. Redwood, Norfolk, of section on neurology and psychiatry; and Dr. Wm. B. Porter, Richmond, of section on medicine.

The Seaboard Medical Association

Meets at the Chamberlin Hotel, Old Point Comfort, December 3rd, 4th, and 5th, under the presidency of Dr. A. M. Burfoot, Fentress, Va. An interesting program has been prepared and a most cordial invitation has been extended all doctors and their families.

Postgraduate Course in Ophthalmology and Otolaryngology.

A series of lectures and clinics will be sponsored by the University of Virginia, at the request of the Virginia Society of Otolaryngology and Ophthalmology, December 2nd-7th, inclusive. These will be held in the amphitheater and operating rooms of the University Medical School and Hospital. In addition to prominent speakers from New York, Philadelphia, Grand Rapids, Mich., and Iowa City, Iowa, there will be several from University and Richmond.

The fee for the whole course is $25.00 or for the first or second half, $15.00 each. Those desiring to register should communicate with Dr. Fletcher D. Woodward, Box 1685, University, Va.

Group Hospitalization in Richmond.

The Richmond (Va.) Hospital Service Association has been licensed by the State Corporation Commission to sell contracts for this service in Richmond. It will be given by Stuart Circle, Johnston-Willis, St. Elizabeth's, Retreat for the Sick, and the Medical College of Virginia Hospitals. Requirements for this group hospitalization are that contracts may be sold to only 10,000 people in the city. The registration fee is $1.00 plus 85 cents a month. The service is available to employed persons, white and colored, male and female, provided they join in groups of not less than ten, representing not less than 40 per cent of the total number of employees at any establishment. The service provides twenty-one days of hospitalization in any one year in a two-bed room in any of the hospitals above named, when prescribed by the family physician or doctor attending the member. The service has flexibility so that those who wish privacy may obtain it by payment of the difference in the cost between single and double rooms.

The Association is composed of twenty-nine members, fifteen representing the five institutions giving the service and fourteen the business interests of the city. Mr. Thomas N. Boushall is president of the organization; Mr. T. N. Jones, vice-president; Dr. L. E. Jarrett, superintendent of the Hospital Division of the Medical College of Virginia, chairman of the Board of Directors, and Mr. M. Haskins Coleman, secretary and general manager. Mr. Coleman was for a number of years director of Johnston-Willis Hospital and is well fitted for this position. His offices are on the first floor of the Professional Building in Richmond.

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Married.

Dr. William Durwood Suggs and Miss Grace Lorraine, both of Richmond, Va., November 2nd.

Dr. Thomas Stanley Meade and Miss Mary Belle Long, both of Richmond, Va., November 7th.

Dr. Jethro Meriwether Hurt, Blackstone, Va., and Miss Margaret Virginia Bennett, daughter of Mrs. Bennett and the late Dr. Wm. Wallace Bennett also of Blackstone, November 6th.

Dr. Herbert W. Lewis,

Dumbarton, Va., who was acutely ill in a Richmond hospital for two months and a half, returned home early in November and is now convalescing at his former home in Culpeper, Va.

Dr. Carrington Williams,

Richmond, Va., was elected secretary of the English-Speaking Union of this city, at its annual meeting in November.

Dr. V. L. Litsinger,

Farnham, Va., was elected a member of the executive committee for his district, at the annual meeting of the Richmond County Chapter of the American Red Cross.

Dr. N. P. Fitts,

Class of '29, Medical College of Virginia, recently of Maurertown, Va., has now located at Strasburg, Va.

Dr. Mulford Honored.

On October 31st, Dr. H. K. Mulford, Philadelphia, was honored with a dinner in celebration of his Golden Pharmaceutical Anniversary. Dr. Mulford was the first in this country to supply Diphtheria Antitoxin for use by the medical profession distributed through the pharmacist. He also perfected and patented the well-known crown tablet machine for making compressed tablets. The degree of Master of Science was conferred upon Dr. Mulford in 1918 and the highest honor in pharmacy, Doctor of Pharmacy, was conferred upon him by his Alma Mater in 1933. He is now Director of the Research and Biological Laboratories of the National Drug Company of Philadelphia.

Dr. Mildred B. Forman,

Class of '34, Medical College of Virginia, who finished her internship at the Montgomery Hospital, Norristown, Pa., in July and has since been studying at Johns Hopkins Hospital, Baltimore, has opened offices at 2812 Market Street, Wilmington, Del., for general practice.

Medical College of Virginia News.

Dr. Sidney S. Negus, professor of chemistry; Dr. Frank L. Apperly, professor of pathology; Dr. Harvey B. Haag, professor of pharmacology, and Dr. Lee E. Sutton, Jr., dean of the school of medicine, attended the annual meeting of the Association of American Medical Colleges in Toronto.

During the month of October 5,861 patient visits were made to the outpatient department by 2,756 individuals, an average of 217 patients per clinic day.

The contract for the foundation of the new clinic building has been awarded to A. H. Calligan and Company and excavation is under way. The new building, to cost about $550,000.00, equipped, is expected to be ready for occupancy by the first of January, 1937.

Dr. William B. Porter, professor of medicine; Dr. I. A. Bigger, professor of surgery, and Dr. Lee E. Sutton, Jr., dean of the school of medicine, are attending the annual meeting of the Southern Medical Association in Saint Louis. Dr. Sutton is giving a report on the five Saint Philip Hospital postgraduate clinics thus far conducted by the college for Negro physicians. Dr. Bigger is giving a paper on the Diagnosis of Heart Wounds. Dr. Porter is secretary of the medical section of the Association.

General Walter Drew McCaw, of Woodstock, New York, was a recent college visitor.

Dr. Samuel A. Eliot spoke to the student body on November 15th.

Two grants totalling $24,123.00 have been made by the Works Progress Administration to the college. Under these grants a tunnel will be constructed between the Egyptian Building and the Dooley Hospital; the old ampitheatre room in McGuire Hall will be converted into two stories, providing lecture rooms, laboratories, and offices. The allotments will also cover demolition of old

buildings, painting, and general repairs to college properties.

Dr. E. H. Ingersoll is making a series of motion pictures depicting present activities of the college, and showing interesting pictures of the past.

News from University of Virginia, Department of Medicine.

At the meeting of the University of Virginia Medical Society on October 21st, Dr. Staige D. Blackford read a paper on Chronic Duodenal Dilatation and Obstruction.

At the meeting of the Medical Society on November 4th, the following program was given by speakers from the Medical College of Virginia: Dr. I. A. Bigger, The Diagnosis and Localization of Wounds of the Heart; Dr. William B. Porter, The Cause of the Electrocardiographic Changes in Pericardial Effusion; Dr. Rolland Main, The Physiology of the Pericardium; and Dr. Paul Kimmelsteil, Intercapillary Glomerular Sclerosis.

On November 14th, Dr. Richard Cannon Eley, Instructor in Pediatrics and Communicable Diseases at Harvard Medical School, spoke before the Medical Society on the subject of The Treatment of Hemophilia with Placental Extracts.

Postgraduate Course in Gastrointestinal Diseases.

On October 31st, November 1st and 2nd, a postgraduate course in gastrointestinal diseases was held at Duke Hospital, Durham, N. C. Among those giving lectures were the following from Virginia: Dr. Hugh H. Trout, Roanoke; Dr. Walter B. Martin, Norfolk; Dr. Robert L. Payne, Norfolk; and Dr. J. Shelton Horsley, Richmond.

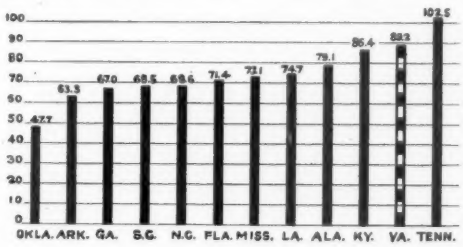
There were more than 550 doctors registered, many being from Virginia. In addition to those named above, the following names were reported to this office: Drs. L. E. Stubbs, J. W. Sayre, E. B. Mewborne, and B. L. Carleton, of Newport News; and Drs. J. E. Warinner, E. T. Trice, E. L. Flanagan, and A. Stephens Graham, of Richmond.

Christmas Seals and What They Do.

Continuing a custom that is now almost traditional in American life, Christmas Seals will appear again throughout the nation on Thanksgiving Day. From then until Christmas they will make their silent plea for aid for the tuberculous. For more than a quarter of a century the Virginia Tuberculosis Association and its 118 local organizations throughout the State have been waging war against this disease. They point out startling facts about it that deserve the attention of everyone.

Although progress has been made in the fight, tuberculosis is still the greatest cause of death in this country between the ages of 15 and 45, and in Virginia about 2,000 people die each year from this disease.

Tuberculosis is still Public Enemy No. 1 Among All Preventable Diseases in Virginia!



Virginia's Rank Among Southern States in Deaths From Tuberculosis

(Death Rates per 100,000 Population for the Year 1932)

One and one-half times as many young women as young men between the ages of 15 and 24 are its victims.

It causes an annual economic loss to Virginia of approximately $30,000,000.

The work financed by Christmas Seal funds is varied, but it is all directed toward the discovery of unknown cases of tuberculosis, securing treatment for them, and educating the public in basic facts about the disease so they will know how to protect themselves from it. Education of the public is the fundamental purpose of the organization. If modern knowledge about the disease were properly applied by the public, tuberculosis would soon be under control. Educational work is, therefore, unceasing.

Nursing service is frequently the major activity. Tuberculin testing of children, has assumed an important place in tuberculosis programs. X-rays are given when the physical examination or tuberculin tests indicate the possible presence of active disease. Rehabilitation work, assisting the tuberculous

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patient to discover his most productive activity and to secure adequate training in this field, is being given greater emphasis as a result of recent studies.

The varied program of work and the number of persons assisted by the tuberculosis associations during the year are a remarkable demonstration of the power of the penny, for it is all made possible by the sale of Christmas Seals for a penny each during the few weeks between Thanksgiving Day and Christmas.

Dr. Ennion S. Williams,

Richmond, Va., who became associated with the Medical Department of the Life Insurance Company of Virginia, last November, has been named assistant medical director of that Company. Dr. Williams is a son of the late Dr. Ennion G. Williams, first State Health Commissioner of Virginia.

Graduate Course in Ophthalmology and Otolaryngology.

Announcement is made that the tenth annual Spring Graduate course in Ophthalmology and Otolaryngology will be held at Gill Memorial Hospital, Roanoke, Va., the week of April 6, 1936. A number of lecturers of international reputation will appear on the program.

Dr. W. R. Williams,

Richlands, Va., was named the first of this month by Governor Peery as a member of the State Board of Health, succeeding the late Dr. Joseph A. McGuire, of Norton, Va.

Dr. B. J. Atkinson,

Emporia, Va., was among those elected members of the Emporia Chamber of Commerce, at its meeting held early in November.

The National Formulary.

The American Pharmaceutical Association announces that its Council has officially approved December 16, 1935, as the date when the new N. F., sixth edition, will be released for sale in all parts of the country, and has also approved June 1, 1936, as the date when this edition will become official and will supersede the N. F. V. This new National Formulary represents a complete and thorough revision of N. F. V., and admissions and deletions are based on information obtained in the U. S. P.—N. F. Prescription Ingredient Survey.

Addition to the University Hospital Near Completion.

The new wing of the University of Virginia Hospital will be completed January 1st. The building is a PWA project and is being erected at the cost of $208,500. It will contain forty-three rooms for private out-cases. A majority of these rooms will have private baths and the entire building will be air-conditioned. It will also house private offices for the members of the hospital staff, as well as orthopedic, obstetric and delivery rooms.

Dr. John T. Hazel,

Recently located at the U. S. Marine Hospital, Boston (Chelsea), Mass., is now at 4014 13th St., Clarendon, Va.

Dr. A. C. Broders,

Professor of surgical pathology and director of cancer research of the Medical College of Virginia, Richmond, was the speaker at the meeting of the Norfolk County Medical Society on November 11th, his subject being "The Modern Conception of the Cancer Problem."

Dr. Ernest Buxton,

Class of '33, Medical College of Virginia, who interned at Grady Hospital, Atlanta, Ga., has located for general practice in Richmond, Va., and has offices at 1001 Grove Avenue.

The Association of Surgeons of the Chesapeake & Ohio Railway

Held its annual meeting at the Greenbrier Hotel, White Sulphur Springs, W. Va., on November 8th and 9th. There was an attendance of between 350 and 400 surgeons and members of their families. Dr. G. M. Todd, Toledo, Ohio, succeeded Dr. J. M. Emmett, Clifton Forge, Va., as president, and Dr. Walter E. Vest, Huntington, W. Va., was named vice-president. Mr. G. E. Meanley, Richmond, Va., continues as secretary. In addition to papers on scientific subjects, the very interesting movie, "George Washington's Railroad," was shown.

The Ladies Auxiliary of the Association took this occasion to honor Dr. William T. Oppenhimer, of Richmond, Va., who has been chief surgeon of the railway for twenty-two years, by presenting him with a silver bowl. The presentation was made by Mrs. J. M. Emmett, of Clifton Forge Va., president of the Auxilary, and Mrs. Southgate Leigh, of Norfolk, Va.

Civil Service Examinations

Are announced for Principal Medical Officer (Bacillin Calmette-Guerin) in the Indian Service at Large, and for Director, Division of Maternal and Child Health, and for Director, Crippled Children's Division, both in the Children's Bureau. Applications for these examinations must be on file with the U. S. Civil Service Commission, Washington, D. C., not later than December 9, 1935.

Dr. Woodrow W. Tyson,

Class of '35, Medical College of Virginia, received an appointment to the American Hospital, Paris, France, and entered upon his duties there several weeks ago.

Dr. Linwood Farley,

Recently connected with the Southwestern Virginia Health District at Abingdon, Va., has been made health officer of the Hanover County Health District, with headquarters at Ashland, Va.

Dr. Gladys Smithwick,

Of the class of '25, Medical College of Virginia, after a service of five and a half years with the Southern Presbyterian Mission at Suchow, Kiangsu, China, is on a furlough of a year, having returned to this country by way of Europe. Her headquarters while here will be at her home, Morven, N. C.

American College of Surgeons.

At the meeting of this Association in San Francisco, in October, Dr. Donald C. Balfour, Rochester, Minn., was installed as president, and Dr. Eugene H. Pool, New York, was named president-elect.

The Association of American Medical Colleges,

At its annual meeting in Toronto, October 28th-30th, installed Dr. John H. Wyckoff, New York, as president. Dr. Stanley Ryerson, Toronto, was chosen president-elect; and Dr. Fred C. Zapffe, Chicago, re-elected secretary. The next meeting will be held in Atlanta, Ga., October 27-29, 1936.

Educational Material on Cancer Available in Virginia.

The American Society for the Control of Cancer through its Southern Field Representative, Dr. J. W. Cox, announces that the following cancer educational material is available to professional or lay organizations, as stated:

Slides—Tumors of the Breast (Medical); and Tumors of the Uterus (Medical) from Dr. J. Shelton Horsley, 617 W. Grace Street, or Dr. F. J. Wampler, Medical College of Virginia, both of Richmond.

Film Strips—Carcinoma of the Breast (Medical); Tumors of the Uterus (Medical); Fight Cancer with Knowledge (for women's clubs, luncheon clubs and other lay audiences); Cancer: Its Life History and Practical Measures for Its Control (for university students, nurses, etc.). All of these may be obtained from Dr. Wampler.

Film Strip Projectors and *Film Without Projector* (movie) may also be secured from Dr. Wampler. An eight-minute Canti film is available for the medical profession, medical students, nurses, etc.

Dr. Beverley R. Tucker,

Richmond, Va., attended the exercises, early in November, on the occasion of the presentation of a portrait of his kinsman, John Randolph, to the Courthouse of Charlotte County, Va., his daughter unveiling the portrait.

Nurses' Institute Held in Richmond.

More than 150 nurse educators and students throughout the State attended the fourth annual Institute of Nursing at the Academy of Medicine Building, Richmond, Va., November 14th to 16th. Miss Lulu K. Wolf, Chairman of the Educational Section and Miss Frances Helen Zeigler, President, Graduate Nurses' Association of Virginia, presided at the opening sessions of the Institute which was sponsored by the Graduate Nurses' Association of Virginia.

The subjects that were discussed were especially timely for schools of nursing. The topics of last years' Institute centered around the revision of the curriculum which is under way at the present time, and the discussions this year enlightened the nurse educators as to some of the methods that may be used when the new curriculum is put into operation.

Miss Myrtle Hollo, Acting Assistant Professor, the Cabaniss Memorial School of Nursing Education, University of Virginia, addressed both the morning and afternoon opening sessions of the Institute on "The Head Nurse as a Teacher and Administrator" and the "The Head Nurse in Our Guidance Program." The characteristics of a good ward teaching program were outlined and sugges-

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tions given as to the methods which could be used in putting it into operation. She stressed the fact that the curative function of the hospital is no longer its only one. She emphasized the need for students to be taught to recognize their responsibility in the community health program. The use of records in judging the personality of students was explained. An open discussion was led by Miss Clara G. Lewis, Instructor, Hampton Institute School of Nursing, Hampton, Va., and Miss Ione Smith, Instructor and Supervisor, Medical Nursing, Stuart Circle Hospital, Richmond, Va.

Miss Virginia Henderson, Instructor of Nursing Education, Teachers College, Columbia University, was the principal speaker at the second session. Her subjects were "Trends in the Teaching of the Nursing Arts" and "Methods of Teaching the Nursing Arts Program." An analysis was made of the way in which the teaching of the Nursing Arts has developed in the schools of this country, the strengths and weaknesses in each period of its development and the way in which past and present practices are being modified and adapted to more adequately meet the needs of the schools today. Considerations influencing the selection of methods of teaching were discussed. The uses and limitations of such methods of teaching as the demonstration, the clinic, the symposium, lecture, discussion, conferences and tests were dealt with briefly. Discussions were led by Miss Fern Allen, Assistant Superintendent of Nurses, St. Elizabeth's Hospital, Richmond, and Miss Verna Foster, Instructor, Virginia Baptist Hospital, Lynchburg. Miss Ethel M. Smith, Director, Virginia Schools of Nursing, and Miss Louise Oats, Professor, The Cabaniss Memorial School of Nursing, University of Virginia, presided.

At the third session, Miss Henderson discussed "Facilities for Teaching the Nursing Arts." Miss Robena Combs Anderson, Instructor and Supervisor, Pediatric Nursing, Medical College of Virginia, led the open discussion.

Each afternoon session was followed by an informal tea. All who attended the Institute felt that it had been an inspiration.

Dr. Harold B. Damron,

Class of '32, Medical College of Virginia, recently connected with the CCC Camp at Beltsville, Md., has located for practice at Elizabethton, Tenn.

Scientific Exhibit—Kansas City.

The Scientific Exhibit at the Kansas City meeting of the American Medical Association will be held in the Municipal Auditorium in conjunction with the other activities of the Association, May 11-15, 1936. The exhibit will cover a wide variety of subjects and will be an interesting feature of the meeting.

Applications for space in the Scientific Exhibit close on January 27, 1936, and assignments will be made shortly thereafter. Those desiring space should communicate promptly with Dr. Thomas G. Hull, Director of Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago, Ill.

Inter-State Postgraduate Medical Association.

At the annual meeting of this Association in Detroit, the middle of October, Dr. David Riesman, Philadelphia, was installed as president for the coming year, and Dr. John F. Erdmann, New York, was chosen as president-elect.

Dr. Gilbert O. Crank,

Formerly located at Maurertown, Va., and more recently at Charleston, W. Va., is now at Lawton, W. Va.

Dr. J. Dean Creger,

Class of '34, Medical College of Virginia, who interned at Sheltering Arms Hospital, Richmond, has located for general practice at St. Paul, Va.

Dr. J. C. Sutherland,

Who had practiced at Clintwood, Va., since 1908, moved to Sparata, Ill., early this fall, where he has bought a hospital and residence and expects to practice.

Radio Health Broadcasts.

The American Medical Association broadcasts for December are as follows:

3rd—Tuberculosis, Dr. Morris Fishbein.
10th—Hunting Accidents, Dr. Morris Fishbein.
17th—Animal Diseases in Man, Dr. W. W. Bauer.
24th—Eat, Drink and Be Merry, Dr. W. W. Bauer.
31st—Pneumonia, Dr. W. W. Bauer.

These programs are given over the NBC Blue Network and begin at 5:00 P. M., Eastern Stand-

and the title of the program is "Your Health." Tell your patients to listen in!

Annual Report of the Rockefeller Foundation.

According to the recently published report of this Foundation, they expended $12,679,775 during the year 1934, $2,200,00 of which was for public health activities. This was used in field research, surveys and control campaigns, gave aid to national and state services, and continuance of its contribution for the training of public health personnel through aids to schools, etc. The total amount appropriated for work in the medical sciences was $1,026,200. In the field of the natural sciences, $1,051,210 was granted. The social science appropriation for 1934 amounted to $1,164,690. Among the grants made in this field was one to the Institute for Research in the Social Sciences at the University of Virginia. In addition to this amount allowed for social sciences, appropriations amounting to $525,500 were made in connection with emergency grants. The field of humanities was allowed an appropriation of $749,500. This program confined itself to two fields of operation: the improvement of international understanding through cultural interchange, and the preservation and interpretation of American cultural traditions.

The book containing this report contains 408 pages and may be obtained from the Rockefeller Foundation at 49 West 49th St., New York.

Infirmary for Masonic Home of Virginia.

Dr. R. D. Garcin, for a number of years physician to the Masonic Home of Virginia, Richmond, announces that after thirty years of hoping and dreaming, his plan for an infirmary at the Home has been realized. Dr. and Mrs. Robert S. Barrett, Alexandria, have most generously given the money as a memorial to their son, and work has already started on the building.

For Sale—

Surgical instruments, cabinet, and office equipment of general practitioner. Articles in splendid condition at less than half price. For information, write Mrs. C. G. Dold, Buena Vista, Va. (*Adv.*)

Doctor Wanted—

At Crockett, Va., eight miles from the county seat of Wythe and four miles from the Lee Highway, with a hard surface road leading south to this point. Can collect between five and six thousand yearly, and the right man can exceed these figures. Fine roads, fine water, and a fine country in which to practice. For further information, write Mr. G. M. Fisher or Mr. A. B. Hounshell, both of Crockett, Va. (*Adv.*)

Position Wanted.

Excellently qualified OALR man available; 31; married; class A Southern University graduate, with twenty months otolaryngology in a New York teaching hospital. Can also do rhinoplastics. Licensed in Virginia. Answer "OALR," care this JOURNAL. (*Adv.*)

For Sale.

Residence (A. M. I.) of the late Dr. W. D. Sydnor, Hamilton, Va., and 5 acres, $6,000; terms. Wonderful opportunity for a physician. Owing to death of Dr. Clagett recently leaves town and community without a physician where there has always been two or more. C. C. Elsea, Realtor, Bluemont, Va. (*Adv.*)

Obituary Record

Dr. Joseph Albert McGuire,

Well-known physician of Southwestern Virginia, died at his home in Norton, Va., October 25th, following a stroke. He was 59 years of age and a graduate in medicine from the University of Virginia in 1900. Dr. McGuire had been a member of the State Board of Health since 1925, and had been a member of the Medical Society of Virginia for thirty-seven years. His wife and a daughter survive him.

Dr. Joseph Edward Clagett,

Prominent physician of Hamilton, Va., died October 27th, following a heart attack. He was 56 years of age and a native of West Virginia. Dr. Clagett graduated from the former Maryland Medical School, Baltimore, in 1910, and had practiced in Hamilton since his graduation. He had been a member of the Medical Society of Virginia for the last ten years. His wife and two sons survive him.

ard Time. They are given in dramatized form

Resolutions on Death of Dr. Floyd.

The Northampton County Medical Society, at its meeting on October 2nd, adopted the following resolutions on the death of Dr. G. Fred Floyd:

WHEREAS: The Northampton County Medical Society has learned with profound regret of the death of their beloved and esteemed past-president, Dr. G. Fred Floyd, therefore,

RESOLVED: FIRST: That in the passing of Dr. Floyd, Northampton County has lost one of her landmarks, a typical family physician of the old school. He was idealized by his patients, and admired by his colleagues. He was strictly ethical in all his dealings and was ever ready to lend a helping hand to the younger members of the profession.

A kindhearted and unselfish man as well as a skilled physician, he gave his time and his skill liberally to the poor, the unfortunate, and ill ones of our community.

RESOLVED: SECOND: That a page in the minute book of this Society be set aside and dedicated to his memory.

RESOLVED: THIRD: That a copy of these resolutions with the expression of our sincerest sympathy be sent to the family, and a copy to the local newspaper, and to the VIRGINIA MEDICAL MONTHLY.

Signed: J. WALKER JACKSON,
E. W. P. DOWNING,
W. J. STURGIS,
Committee.

Resolutions on Death of Dr. Hume.

The following resolutions adopted by the Norfolk County Medical Society were drawn up just after Dr. Hume's death, but the Committee did not make its report until resumption of the Society's activities in the Fall:

The Norfolk County Medical Society in extraordinary session on July 30th, records with sorrow and deep regret the death of one of its valued members, Dr. Joseph S. Hume, on July 29, 1935. Possessed of qualities of high professional excellence he brought to the practice of his chosen specialty a sympathetic understanding and gentleness of execution that endeared him to his numerous clientele and won the admiration of his fellow practitioners. His untimely demise in the early years of his fruitful activity leaves a void in the ranks of the profession and in the lives of his many appreciative patients. Born in Portsmouth, Va., on November 1, 1888, his preliminary and professional education amply fitted him for the adoption of the specialty he continued to advance and improve.

At the call of his country he abandoned his rapidly growing practice, joined the University of Virginia Base Hospital Unit No. 41, and went with that organization to France. While stationed at St. Denis, the large amount of special work of the Unit devolved almost wholly on his shoulders and he bore the burden with the uncomplaining efficiency and fortitude that earned the admiration of his fellow officers.

Returning to Norfolk he took up successfully the practice of his specialty and carried on in the face of what he knew was a fatal sickness long before he was finally incapacitated.

He died as he lived—courageously.

It is moved that this resolution be recorded in the minutes of the Norfolk County Medical Society, that a copy be forwarded to the members of his family, and the VIRGINIA MEDICAL MONTHLY.

HARVIE S. BAKER, *Chairman.*
LOMAX GWATHMEY,
B. R. KENNON,
H. R. ETHERIDGE,

Dr. Charles Marion Rains,

Bohannon, Va., died October 27th, at the age of 77. He graduated from the College of Physicians and Surgeons, Baltimore, in 1877. Dr. Rains had practiced medicine for more than half a century in Mathews County and had been county coroner for twenty-five years. He was formerly a member of the Medical Society of Virginia. His wife and two daughters survive him.

Dr. Vance A. Vermillion,

For a number of years a practicing physician at White Gate, Va., died on August 31st. He was 57 years of age and graduated in medicine from the Maryland Medical College, Baltimore, in 1900.

Dr. Daniel Kerfoot Shute,

Washington, D. C., died October 21st. He was a native of Alexandria, Va., and 77 years of age. Dr. Shute graduated from the George Washington University School of Medicine in 1884, and at the time of his death was professor emeritus and lecturer in anatomy and clinical ophthalmology in this school. Dr. Shute was a former president of the Medical Society of District of Columbia and had been a member of the Medical Society of Virginia for twenty-nine years. His wife survives him.

Dr. Joseph Edward Taylor,

Danville, Va., died October 24th, following an illness of several weeks. He was 63 years of age and received his medical degree from the Medical College of Virginia in 1893. He was for many years Danville city coroner and jail physician. Dr. Taylor was well-known in connection with baseball, being president of the Bi-State (Virginia and North Carolina) Baseball League. A daughter survives him.